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Original Articles

HYSTERIA, ITS NATURE AND ITS POSITION IN NOSOLOGY.*

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PHILADELPHIA.

This paper is prompted by the fact that of late various views have been enunciated which bear vitally on both the nature of hysteria and on its position in our nosology. It has seemed to me that the recent tendency has been to include under the term of hysteria symptoms that really belong to other affections, and further to apply interpretations that are fundamentally defective. Thus, a change in the personality such as gives rise to a multiple personality must certainly be admitted to be the exception and not the rule, and to claim disintegration as the essential feature of hysteria seems to me to be an error. It mistakes that which is merely an occasional epiphenomenon as the essential cause of the affection. Again the view that has lately been advanced by Babinski, that the symptoms of hysteria owe their origin entirely to suggestions from without, especially to suggestions from the medical examiner, is a position so out of keeping with well-established facts as also to demand open criticism, for it absolutely ignores the one cardinal pathologic feature of hysteria, namely, that of pathologic suggestibility.

Further there has been an unmistakable tendency to confound two such radically dissimilar affections as neurasthenia and hysteria; for instance, Morton Prince, for whose services in this field I have the most profound admiration, goes so far as to speak of the neurasthenic state as one of the stigmata of hysteria, a point of view which I can not but regard as erroneous. Again, Donley regards neurasthenia as the mildest expression of a dissociated, disintegrated, unstable, weakened synthesis of the personality, and hysteria and dissociated or multiple personality as the more intense grades of the same process. Here, again, is shown the same tendency to correlate neurasthenia and hysteria incorrectly. While I do not decry psychologic studies as applied to medicine, they are of necessity so speculative in their nature that conclusions based on them should be accepted with the greatest caution. Abstract conceptions are treated as concrete realities and there is no telling how far from observed facts such a path may lead.

It behooves us to determine first the clinical facts in regard to the nervous disturbances in question, and it is of the utmost importance not to confound the various general nervous affections as they present themselves clinically. No less than five conditions should be borne in mind. In the first place we have the three cardinal neuroses, neurasthenia, hysteria and hypochondria, all clinically vastly different from each other as we shall presently see. Again, we should bear in mind the various nervous states prodromal to the fully developed psychoses, such as the prodromal or incompletely developed periods of dementia præcox, paranoia, the manic depressive psychoses and of other neuropathies. To these states which never present either the symptoms of neurasthenia or hysteria I have applied collectively the term of the "neurasthenoid states." The symptoms are never neurasthenic or hysteric; they simply grossly resemble neurasthenia and are properly termed neurasthenoid, not neurasthenic. Finally, we should bear in mind the nervous symptoms which accompany and are dependent on various visceral and general diseases, organic and functional. Here, again, the symptoms are never those of true neurasthenia and there is present merely a neurasthenia symptomatica.

The five conditions, then, that we are to bear in mind are, first, neurasthenia; second, the neurasthenoid states; third, neurasthenia symptomatica; fourth, hysteria, and, fifth, hypochondria.

Let us give our attention, first, to the fundamental distinctions obtaining between neurasthenia, hysteria and hypochondria.

When we come to study the first of these, neurasthenia, in detail, we find that its symptoms are essentially those of chronic fatigue, a fatigue which has become exaggerated and pathologic, and for this reason I applied many years ago to neurasthenia the term the "fatigue neurosis." This means, as we shall see, something very different from the conditions of the nervous system obtaining in infection, toxemia, diseases of the blood or diseases of the viscera. Patients suffering from these conditions may be weak, but they do not have neurasthenia.

On the surface, the symptoms of neurasthenia seem hopelessly multiple and complex, but on closer examination it becomes evident that they possess unequal value. They are readily classifiable as sensory, motor, psychic and somatic. As soon as we begin to analyze them in a systematic manner, we find that the sensory symptoms express themselves first in generalized fatigue sensations, that is, a generalized sense of tire, and, secondly, as localized fatigue sensations, such as headache, backache and limbache. When we turn our attention to the motor symptoms, we find present in varying degree muscular fatigue, muscular weakness and, above all, ready muscular exhaustion. When we turn our attention to the psychic symptoms, we find a diminution in the capacity for sustained mental effort, ready mental exhaustion and diminution in the spontaneity of thought. When we turn our attention to the somatic symptoms, we note especially atony of the digestive tract, atony of the circulatory apparatus, disturbances of the secretions

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the result of deficient innervation and finally disturbances of the sexual functions which can only be interpreted as symptomatic of exhaustion. These very obvious fatigue symptoms I have termed the primary or essential symptoms of neurasthenia. In addition to these, other symptoms make their appearance which I have termed the secondary or the adventitious symptoms. The essential symptoms are always those of chronic and persistent fatigue, while the adventitious symptoms are the secondary outgrowths of this fatigue. The difference between these two groups can readily be illustrated in many ways. Thus the neurasthenic patient presents, as already stated, a generalized sense of fatigue which is usually very pronounced. Not infrequently there are present secondary symptoms the indirect outgrowths of this generalized fatigue; for instance, the patient not infrequently presents a feeling of uncertainty in regard to his movements or in regard to his environment; that is, he sometimes complains of feeling giddy or dizzy without presenting any symptoms of objective vertigo. This symptom is doubtless referable to the asthenia and it appears to be due to the lessened vasomotor tone of the cerebral vessels, so that slight efforts or changes of position affect intracranial circulation. This dizziness is a secondary outgrowth of the primary fatigue and must be regarded as a secondary and not as a primary symptom. Again, headache is one of the common localized fatigue sensations and not infrequently we have associated with headache sensations of drawing and constriction, more especially drawing sensations in the occiput and back of the neck, a sense of lightness or emptiness of the head, or, on the other hand, of heaviness and fulness. These associated phenomena must again be classified as secondary or adventitious symptoms. Like the dizziness, they are probably to be referred to secondary vasomotor changes and are only indirectly the outcome of the fatigue. Many other illustrations might be given. Suffice it to say that the picture of fatigue, both as regards primary and secondary symptoms, is equally well illustrated by the phenomena presented by the motor, the sensory, the psychic and the somatic symptoms.

Neither time nor the objects of this paper will permit of a detailed analysis of the symptoms of neurasthenia. Enough has perhaps been said in the preceding paragraph to indicate the point of view with regard to neurasthenia that I have for many years maintained. Before turning our attention to hysteria, however, it would be wise to present a brief résumé of the psychic symptoms obtaining in neurasthenia. The psychic disturbances present as their most striking feature the following primary symptoms: first, a diminished capacity for sustained mental effort; just as the patient is incapable of long-continued physical effort, so is he incapable of long-continued mental effort; early exhaustion is manifest. Second, there is diminished spontaneity of thought, and this, like the failure of the power for sustained attention or sustained mental effort, is only another sign of fatigue. The secondary psychic symptoms of neurasthenia are intensely interesting. They are, to my mind, habitually misinterpreted. We note that a man who is chronically tired, loses some of his personal vigor, force, aggressiveness and, above all, will power. Secondly, coupled with this lack of will power, hesitation, uncertainty, indecision sooner or later make their appearance. Thirdly, there is, in addition, a markedly increased irritability; that the tired man is cross is as well known to the laity as to ourselves, and this irritability is merely the expression of a more or less marked impairment of inhibition. Lastly, we find that the man who is chronically tired is also afraid; weakness and fear inevitably go hand in hand. Indeed, it is a well-known fact that neurasthenic patients are subject to spontaneous attacks of fear—fear causeless in origin and generalized in character. Sometimes these attacks of fear are accompanied by pallor of the face and palpitation of the heart, just as is normal fear. More rarely they are accompanied by more pronounced signs, the patient then suffering from sudden weakness, pallor, coldness of the surface, excessive tachycardia and even relaxation of the sphincters. Such attacks are commonly mistaken for attacks of hysteria, but they bear no resemblance whatever to the latter affection.

These secondary symptoms, or diminished will power, indecision, loss of inhibition and fear, may, if the neurasthenia occur in a subject that is also neuropathic, give rise to the various so-called neurasthenic insanities. Thus in a patient of pronounced neuropathic heredity—never in a normal individual suffering from neurasthenia—diminished will power may give rise to aboulia; an impairment of decision to an insanity of indecision, a *folie du doute;* loss of inhibition to one or more of the various obsessions, the so-called insanities with irresistible impulse; and generalized fear may give rise to one or more of the special forms of fear, such as agarophobia, claustrophobia and the like. It can not be too strongly insisted on that true and uncomplicated neurasthenia never terminates in mental disease. In a non-neuropathic person, a neurasthenia will always remain a neurasthenia simplex, no matter how profound it may become. In order that the special symptoms I have just enumerated should arise, the patient must be essentially neuropathic; that is, have within himself the elements of degeneration, and it is under such circumstances that fixation and the pathologic association of ideas may arise as secondary symptoms. Thus we may see in a neurasthenic man who is also neuropathic an attack of spontaneous fear come on while in the street. At once there is formed an association between the place in which he finds himself, the street, and the attack of fear, and an agarophobia, fixed and persistent in character, becomes established. Similar explanations apply to other phenomena.

Let us now turn our attention to hysteria. In hysteria, the symptoms are distinguished by the all-important fact that they bear a distinct psychic impress; that is, the impress of a psychic origin. It is hardly necessary in an audience such as this to refer to the various symptoms of hysteria as illustrating this fact. The mere occurrence of anesthesias which bear no relation to nerve supply or spinal segmentation permits of no other interpretation, and this is also true of the motor phenomena. Indeed, one of the striking facts of the motor disturbances is the concomitance of sensory phenomena; thus, if an arm be hysterically paralyzed, that arm is also anesthetic. The entire member is, so to speak, elided from the field of consciousness. Other phenomena, such as those presented by the special senses and by the viscera, equally afford illustrations of the truth of this psychic origin. However, it is the mental symptoms which are especially interesting and important. There is present first an unusual emotional mobility, together with defective emotional inhibition. Phases of depression and phases of unusual exaltation occur without adequate cause. The mind of the patient is impressionable to an extreme degree and reacts abnor-

mally to suggestions of various kinds, and there is established a pathologic suggestibility. Suggestions may have their origin in conditions within or in circumstances without the person of the patient. At times the psychic symptoms appear to be the result of illusions received from the general body surface, from the muscles or from the viscera. In health visceral and organic sensations generally are ignored and enter but little into the make-up of consciousness. In hysteria the patient appears to be not only more susceptible to such suggestions but the latter present themselves in such an illusional form as to be misinterpreted. It is not strange that a patient should firmly believe in the reality and seriousness of her various symptoms and that these should vary greatly from time to time. In this way unconsciously, or rather subconsciously, there may arise such striking phenomena as paralysis, anesthesia, blindness, nausea, vomiting, etc.

It is not necessary before this audience to dwell on the symptoms which have their origin in impressions on the patient from without, nor to insist on the fact that symptoms may arise spontaneously and which are not due to suggestion either from within or without. In hysteria the symptom-group which we have learned as characteristic of neurasthenia is wanting. Case after case of hysteria is met with in which not a single fatigue symptom is present. How, then, can we speak of neurasthenia as being a stigma of hysteria? Is it because the two affections coexist occasionally in the same patient? Certainly this is not an adequate reason for confounding the two affections; true epilepsy not infrequently exists side by side with hysterical convulsions, and one would not for this reason identify epilepsy and hysteria. Similarly hysteria may be superimposed on neurasthenia, just as it may be superimposed on brain tumor. The cardinal features of neurasthenia, ready exhaustion, headache, backache, diffuse muscular weakness, present a picture differing radically from the localized palsies and the anesthesias of hysteria. A neurasthenic never presents a paralysis or a contracture or an anesthesia. The two symptom-groups are absolutely opposed to each other. Neurasthenia is the fatigue neurosis; hysteria is the neurosis of pathologic suggestibility.

Let us now turn our attention briefly to hypochondria. Hypochondria is a neurosis which differs fundamentally both from neurasthenia and hysteria. The fatigue symptoms of neurasthenia and the stigmata of hysteria are both equally absent. In hypochondria the cardinal symptom consists of a disturbance of the general somatic sense; that is, the sensation derived from the body as a whole. This somatic sense or coenaesthesis is a generalized organic sense which embraces a total of all the somatic impressions, and in hypochondria this sense is pathologically affected. In the normal man the nutritive processes in the tissues and the functional changes in the viscera do not under normal conditions impress themselves vividly on the field of consciousness. A sense of physical or organic well-being is, however, produced and enters into the psychic state of the individual. So long as the sum total of the organic impressions is normal, an average degree of well-being is experienced. When, however, this organic sense is pathologically disturbed so that a feeling of ill-being is produced, hypochondria results. In hypochondria this organic or somatic sense is always profoundly disturbed. This disturbance, however, is not accompanied, as in actual visceral or other physical disease, by discoverable lesions, and even when functional changes are present these are so slight and unessential as to offer no explanation of the patient's condition. The patient experiences a sense of not being well, a sense sometimes slight, but more frequently so vivid as to dominate for the time being his life and actions. He usually seeks an explanation of his condition in disease of one or more organs and usually complains of manifold symptoms, vague and distressing. Hypochondria must not be confounded with melancholia. It is not necessary here to draw the differential diagnosis between hypochondria and the manic depressive group of mental affections; not necessary to point out how in the phase of melancholia the picture of psychic depression exists associated with ideas of sinfulness, spiritual ruin, moral unworthiness, but not of visceral disease. In melancholia there is the agony of the lost soul, the belief in crime never to be atoned, while in hypochondria, on the other hand, the patient's ideas relate solely to the conditions of his body. It is the somatic state and somatic depressions with which he is concerned. Although hypochondria is a much neglected field, it is hardly necessary to enter into a detailed description of its symptoms to show how widely it differs from both neurasthenia and hysteria. Suffice it to say that there is an essential neuropathy underlying the condition, that it endures for many years and frequently dominates the lifetime of the patient.

Surely neurasthenia, hysteria and hypochondria differ widely from each other. Essential and striking differences are present in the etiology, in the symptomatology and in the course of these three affections. They are distinct and separate clinical entities and should never be confounded. Physicians are frequently exceedingly careless as to the differentiation between hysteria and neurasthenia; far more frequently do they fail to recognize hypochondria. Hypochondria is almost always labeled hysteria when not a single stigma of the latter affection is present. Hysteria, I find, is also frequently confounded with the neurasthenoid group of cases, an error which is still more unpardonable. Enough has already been said to indicate clearly the means by which the differentiation is to be made.

Having discussed the position of hysteria in nosology, let us now turn our attention more particularly to the interpretations of Morton Prince and of Babinski.

Some years ago I, in common with others, advanced a theory of nervous and mental physiology based on the integral action of the neurone and on a supposed movement of the cell processes. Although the theory of such movement has not been widely accepted, it offers a ready explanation of many of the phenomena observed. Recently Gowers has restated it, while A. Marie, in his interesting work on the dementias, accepts and utilizes the theory as though it were an established fact. The degree of movement in the terminals of the dendrites, collaterals or neuraxons, must, of course, be exceedingly small—simply sufficient to make and break contact. If we accept the opposite view of the anatomic continuity of the neurones and of the direct interchange of fibers from cell to cell, a theory based on the integral neuronal action is notwithstanding a necessity; even if in continuous anatomic relation with each other, the neurones can not all be functionally active at the same time. It results as a corollary of the known physiologic action of the nervous system that given groups of neurones stand in relation to certain other groups; that during functional activity an active relation obtains between the given groups and that during functional quiescence such a relation ceases to exist. In other words, the conditions must be virtual-

ly the same as in the making and breaking of contact, and our conception of nervous action may be the same whether we accept the theory of neuronic amebism or neuronic continuity. Let us apply this conception to a simple hysterical phenomenon, such as a paralysis of an arm. Due, we will say, to a psychic or possibly a physical shock, the neurones of the arm center of the cortex retract their processes or lose their active physiologic relationship with the neurones of the spinal cord and also with the neurones of the surrounding portions of the cortex. In other words, the palsy is due to an anatomic or physiologic isolation of the neurones of the arm center. The disappearance of the palsy is, of course, accompanied by the protraction of the processes or by a resumption of the physiologic relationships.

As is well known, hysteric paralysis and hysteric anesthesia are usually associated so that a hysterically paralyzed limb is elided from the field of consciousness in its entirety. In a sense, such a process of elision is a process of disintegration and can be construed as a disintegration of the personality, and it is conceivable that the same process may lead in given cases to a splitting up of the personality. However, the point for which I contend is that in hysteria the process is not in its essence a process of disintegration. The palsies and anesthesias of hysteria are to be referred rather to a contraction or reduction of the field of cortical activity. Such a reduction, for instance, is seen typically in such symptoms as contraction of the visual field, glove-like anesthesias, hypesthesias and like phenomena. It is probable, indeed, that the cardinal symptom of hysteria, namely, pathologic suggestibility, is itself due to such a reduction. It is one of the conditions of a pathologically increased suggestibility that impressions are not corrected, balanced and correlated, and this want of proper adjustment or association can only be due to a diminution or loss of cortical activity, partial or general. Fissuration and final divisions of the personality must, of necessity, be late phenomena, and as a matter of fact obtain in only a limited number of cases. Further, if we speak of hysteria as a psychic disintegration, we are forced to apply the same term to melancholia, mania, paranoia and the other forms of mental disease, and thus the term loses all distinctive value.

Let us now turn our attention to the claims made by Babinski that the stigmata of hysteria (or pithiatism, as he proposes to call the affection) never arise spontaneouly, but are always evoked by the examinations of the physicians. It is doubtless true that symptoms can be suggested and are frequently inadvertently suggested by physicians, but it is not true that this is the case with all of the symptoms. In order to make clear his meaning, Babinski explains that it is his custom before examining a patient for sensation to request the patient to notify him when a sensation of contact, of pricking, or some other impression, is experienced. Then the patient's eyes having been closed, Babinski applies to various parts of the integument, sometimes on the left, sometimes on the right side, a camel's hair pencil, the point of a pin and at times warm bodies and cold bodies; then he makes passive movements of segments of the limbs, both upper and lower, and finally he has the patient feel various objects of diverse forms. If the patient does not make an immediate reply, Babinski asks: "What do you feel; what is it that I am doing?" He never asks the question, "Do you feel that which I am doing?" or, still worse, "Do you feel as readily on one side as on the other?" for the latter method may furnish the point of departure of a suggestion. He states that for many years since he has adopted this method he has not been able to discover a single case of hemianesthesia in subjects who before consulting him had not been submitted to a neurologic examination, and that it goes without saying that he has exclusively in mind patients having manifestations incontestably of hysteria such as characteristic attacks. He adds that his experience bears on hundreds of individuals of both sexes. He maintains that contracture of the visual field never develops spontaneously no more than does hemianesthesia, but only as the result of suggestion, and this idea he applies to all the phenomena of hysteria.

The keynote of his position is that hysteria is a special psychic state which manifests itself by disturbances which it is possible to produce by suggestion and to make disappear under the exclusive influence of persuasion. Unfortunately for the view of this distinguished neurologist, he fails to recognize the cardinal feature of hysteria which I have here pointed out, namely, a suggestibility which is pathologic. Even if, for the sake of argument, we admit that all the symptoms of hysteria are the result of suggestion, such as may result from unskilled medical examinations, Babinski fails to explain why it is that in healthy persons such suggestions are of no avail. In a normal man or woman a contraction of the visual field can not be brought about by suggestion nor can a hemianesthesia or palsy be brought about by suggestion. Finally, Babinski's view fails utterly to explain some of the remarkable features presented by hysteria, such as the predominance of certain phenomena on one side of the body. It is an experience so common as to go without saying that the ordinary sensory stigmata of hysteria, such as the painful spots under the breast and over the groin, have a special tendency to occur on the left side. This is true also of hemianesthesia and of contracture of the visual fields. If the sensory stigmata of hysteria be entirely a result of unskilled medical examinations, how is it that such phenomena are found more commonly on one side, and that the left? Are we not to seek the explanation in some profound physiologic truth in regard to the difference in the degree of resistance offered by the two halves of the cerebrum? If a cortical reduction takes place in a given case, that cortical reduction, other things equal, takes place first or in most pronounced degree in the right half of the brain; only exceptionally, and doubtless then due to special causes, does it take place first or in most marked degree in the left brain. Further, Babinski's view fails to explain the peculiar association of phenomena, such as the occurrence of a contracted (or most contracted) visual field on the same side as the hemianesthesia, nor even the habitual association of anesthesia with paralysis. Other features, such as the reversal of the color fields, the peculiar limitations and distributions of clavus, of groin pain, of inframammary tenderness and of spinal tenderness are to say the least, equally difficult of interpretation on Babinski's view.

DISCUSSION.

DR. L. HARRISON METTLER, Chicago, pointed out that there is no little confusion abroad as to the differentiation between hysterical and hysteroid states and neurasthenia. Certain practical questions are involved here in regard to prognosis and treatment. Contemplating what the pathology of these two respective conditions may be, so far as hypothetical and some laboratory data permit, what the symptomatology of neurasthenia is, and taking into consideration what Hodge and others have shown in their experimental work, one can hardly

resist the belief that in this disease, there are molecular, chemical, or other minute disturbances in the substance of the neurons. In its broadest sense this would make of neurasthenia a distinct organic disease, though no pathologic changes might be visible under the microscope. This distinct organic nature of the disease explains the relative persistence of its symptoms as compared with those of hysteria. This is true of all neurasthenia, whether it be of the congenital, acquired, or any other type. On the other hand, when we contemplate the hysteric state and try to imagine, in the light of present-day knowledge, its underlying physiopathology, Dr. Mettler said that we are obliged to fall back on psychology and psychophysiologic processes. The more he turns his thought from the normal psychophysiologic side of the question to the abnormal psychophysiologic, it appears to him as though in hysteria there were a break in and among the perceptive processes; that the percepts, the internal reception and interpretation of the external inpouring stimuli are disordered. In hysteria, the environment, acting through the body and affecting the different functions of the brain, gives rise to strange percepts and these percepts thus modified by the disordered reaction of the brain are sent back as a new and strange environment, as it were, through the body. Thus, analyzing hysteric symptoms, for instance in paralyses, they are found to indicate a mere functional difficulty or imaginary inability to move. Being functional and being due to these breaks between the external stimuli and the internal reaction, they are always variable, both in degree and in localization. Considering hysteria in the same way, it is found that hysteria does not stand for any organic pathologic change in any sense of the word. Hysteria is the highest type of a purely functional disease. The more we analyze cases, from the standpoint of hysteria being purely functional and of neurasthenia being broadly organic, the better will we be able to understand and to interpret the symptoms of each, respectively, as well as the inherent nature of each.

DR. SMITH ELY JELLIFFE, New York City, was convinced that the advances which are to be made in hysteria will make many of our present points of view seem centuries old. As in certain biologic sciences in the pre-Linnaen period, classification proceeded along lines of superficial resemblances, so the classification of the functional disorders is largely concerned now with the outward manifestations. Only when Linnaeus utilized the fruit as a basis of classification did botany advance, and only when we get to fundamental causes can our conception of hysteria hope to advance. Hence the psychologic analysis methods of Breuer and Freud, of Janet, of Jung, Ricklin and others seem to be essential if advance is to be made.

DR. GEORGE L. WALTON, Boston, Mass., said that, however distinctly the lines may be drawn between the varieties of psychoneuroses, it will always be impossible to so classify them that the average patient will fall definitely into one or the other class. The majority of such patients are ideo-obsessive. If the obsession takes the direction of over-anxiety regarding the physical or mental well-being, the hypochondriacal tendency becomes paramount; if in the direction of insistence for absolute safety and comfort, claustrophobia and other fears will develop. Obsession always to do the right thing leads to *folie du doute*. If the insistent habit of mind takes the direction of attending to every detail of one's business, of never taking rest or recreation, and of working always under stress of over-solicitude, a degree of exhaustion will result out of proportion to the work performed. In other words, the patient will become a so-called neurasthenic. If obsessed to externalize the emotions, he may become moderately manic depressive. All these tendencies may, and often do, appear in a single individual of neurotic constitution. In such case the diagnosis of psychoneurosis is less misleading than a term of narrower significance, and efforts at psychotherapeutics are more important than efforts at subclassification.

DR. MORTON PRINCE, Boston, Mass., stated that Dr. Dercum is laboring under a misconception of his (Prince's) views in one particular, namely, in thinking that he holds that all neurasthenia is hysteria. Dr. Prince does not doubt that there is such a thing as neurasthenia occurring as a pure fatigue neurosis; but it also occurs as a form of hysteria. Dr. Prince contends that that general syndrome, which is the sequence of, and to a certain extent, the physiologic expression of fatigue, the reaction of a fatigued organism to hysteria; just as paralysis, anesthesia and other phenomena, which occur in hysteria, also occur in other forms of brain disorders. Therefore, while he believes that one of the commonest of the stigmata of hysteria is neurasthenia, he would not hold that all neurasthenia is hysteria any more than that all paralysis is such. His view, he said, may be clinically demonstrated by those cases where the whole neurasthenic syndrome comes on suddenly as the result of a mental shock or emotional condition, and also where it may be removed and restored alternately in a jiffy, with the snap of a finger, so to speak, by a suggestion which changes the whole personality. In such cases neurasthenia is the result of a distintegration of personality. Those who have made studies in the field of altered personality have observed this not uncommon fact.

DR. F. X. DERCUM, Philadelphia, stated that he simply made a plea for clearness and a separation of the cases called nervous. The group of cases that Dr. Walton spoke about he terms *neurasthenoid*, which must be sharply differentiated from neurasthenia, which is the neurosis of chronic fatigue.

WHAT THE AMERICAN MEDICAL ASSOCIATION STANDS FOR.*

GEORGE H. SIMMONS, M.D.
CHICAGO.

[After thanking the association for the honor conferred on him in asking him to deliver the annual address, and bearing witness to the large share taken in the past by Kentucky in support of the American Medical Association and its objects, the speaker proceeded to show that those objects were almost entirely altruistic. He took a bird's eye view of the origin of the Association from a national convention originally summoned to suggest measures for the elevation of the standards of medical education, and showed how that object had alternately come prominently forward and fallen into the background until, in 1874, a period set in in which the business affairs of the Association became almost completely subordinated to the scientific work. The speaker continued:]

During all these years, and with all the discouragements, there were some who persisted in the attempt to accomplish something. On the other hand, there were many who were discouraged, and certainly there was good cause for the discouragement, for in spite of appeals to, and pleadings with, the medical colleges, the majority did as they pleased. Much opposition seems to have come from those delegates who were connected with the poorer schools. As an illustration of this, we find that in 1872 the Committee on Medical Education, after pointing out the many evils in the medical schools, reported that "it seems much easier to show the defects in our present system than to advise a suitable and practicable remedy. The influence of this latter class (college professors) has always been so great in the Association as to prevent its doing what it should have done long ago, viz., establishing a national standard for medical teaching and demanding that the colleges shall accept it or not be recognized."

Similar quotations not quite so direct are to be found

* An address delivered before the Kentucky State Medical Association at the Fifty-second annual session, held at Louisville, Oct. 15-17, 1907.

in the minutes for various years. In this connection let me make a quotation from the minutes of 1857—fifty years ago—and this was after ten years of hard work had been put in by the committee: Dr. Boring of Georgia, after a long time had been spent in discussing the all-important question, offered resolutions to the effect that: 1. The Association had not the power to control medical education. 2. The great objects of the Association were the advancement of medical science and the promotion of harmony in the profession. 3. The attempt on the part of the Association to regulate medical education had signally failed in its object and had introduced elements of discord, and that any further interference on the subject would be useless and calculated to disturb the deliberations of the Association.

Happily, these resolutions were not adopted. But how familiar the argument! Don't do this or there may be discord; don't do that or it will injure the Association. Better, ten times better, produce discord and create temporary dissatisfaction with a few than have the Association fail to do what is right and its duty. But these efforts did not injure the Association; rather they helped it. And so it will be in the future. If the Association is active in its efforts for the benefit of the public and of the profession, even though by such activity it creates opposition among some of the members who may be affected, it will thereby gain the respect of the people and the endorsement of the great majority of physicians.

WHAT HAS BEEN ACCOMPLISHED.

And has the Association, then, accomplished nothing in all these years? Were those discouraged ones correct who said that nothing had been done and nothing could be done? No, and yes. To point to any special thing done at any particular time that resulted in anything tangible is impossible. Of all the resolutions adopted, and there were hundreds of them, not one can be regarded as resulting in any specific good. Of all the correspondence with, and appeals to, medical colleges, and there was an abundance of both, not a solitary bit of evidence is there of any practical compliance.

Nevertheless, since 1848, when colleges were giving the M.D. degrees on less than six months' attendance plus the preliminary apprenticeship to a preceptor—a degree which gave the right to practice in nearly every state in the Union—until now, when a four years' course of at least six months each is required for a degree, which degree does not of itself give the right to practice in but one or two states, there has been a tremendous advance. And in great part at least it is to these efforts—fruitless though they seemed at the time—of the Association in the long ago, that this advance is due. Without appreciating it, it was conducting an educational campaign and creating a sentiment in the profession—and also, to some extent at least, in the public mind—that has produced the better conditions. It has been the moral suasion of the Association that has slowly, but surely had its influence.

MORE RECENT EFFORTS.

With this reference to the past, let us take up the present movement. This had its beginning in 1902, when the House of Delegates adopted an amendment to the by-laws creating a Committee on Medical Education. The next year this committee brought in a report very similar to some that had been made fifty and more years ago, and it certainly must have seemed to those who knew the past and were watching the present that there was no more prospect of permanent results under the reorganization than under the old order of things. During the following year, however, the committee had taken up the matter seriously, and in 1904 it recommended the creation of a body broader than the temporary education committee, one that should be permanent and continuous, and, above all, that should have money with which to do things. Through this recommendation the by-laws were modified and the Council on Medical Education was created. In 1905 this Council made its first report, which contained the outline of the active work proposed for the future. Incidentally, it told of a conference the Council had had with representatives from the various state licensing bodies, from the medical college associations, from the colleges themselves and from the colleges of liberal arts. In other words, of a conference that brought together for counsel all who were directly or indirectly related to the great subject of medical education. This was the first real practical step forward, for it recognized the impossibility of physicians, by themselves, bringing about any changes other than would result alone from moral suasion.

This conference was repeated last year, 1906, and again this year, each succeeding one being more profitable than the preceding and giving evidence of practical results from this cooperative work and interchange of opinions. Undoubtedly they will be continued and be the means of solving problems that have appeared almost unsolvable in the past. They are a recognition of the fact that the question of medical education has a direct relation to academic education, and also that the cooperation of the licensing boards is necessary to success. But much else is being done.

MEDICAL COLLEGE ENTRANCE REQUIREMENTS.

The most important question connected with the subject is that which relates to the entrance requirements, and the term "high school education" is always linked with it. Not only is this term used as the standard by individual schools, by college associations and by state boards, but it also appears in the laws of many states. And yet it is an unknown quantity. One of the important phases of the work at present is that of gathering information and analyzing conditions in the various states in regard to this question. When we consider that there are nearly ten thousand different high schools in the country, the enormity of the task can be appreciated. Correspondence has been, and is being, carried on with the state superintendents, with the principals of high schools, etc., regarding conditions in different states and cities, and as a result it is demonstrated that there are high schools having all the way from one to four years, some of these schools being preceded by only six or seven years in the study of elementary branches, emphasizing what has been known to some before, that the term "high school education" or "high school diploma," without modification, is altogether too indefinite to use in speaking of the preliminary requirements for the study of medicine.

The question of granting advanced standing for work done in the college of liberal arts has made it necessary to make a close study of the method and character of instruction in these institutions, and this, too, is revealing conditions very similar to those connected with the high school problem. The requirements for the bachelor's degree in some of these institutions are actually

lower than those for the high school diploma in some of the high schools.

In the past the statements contained in the medical college catalogues had to be accepted, but this is no longer the case. A personal inspection by a representative of the Council, usually in connection with a representative of the board of examiners, has been made of practically every medical college. As a result, the Council has on record information covering size and character of buildings, the laboratory and other equipments, hospitals, dispensaries, and other means of clinical instruction, etc.; in fine, actual facts obtained by personal inspection. If this personal investigation is carried on year after year, as it presumably will be, and the actual facts regarding some of these institutions are made public, as is likely to be the case, then we may look for better teaching facilities in certain institutions, or a decrease in the number of medical colleges.

EDUCATIONAL STATISTICS.

The collection and publication of statistics regarding medical colleges, medical students and graduates, such as appear in the "Educational Number" of THE JOURNAL each year, originated with and was carried on for several years by THE JOURNAL before the Council was established. The same is true regarding the statistics of the state examining boards. Now, however, this work becomes a function of the Council on Medical Education.

Information of every kind relating to medical colleges of the United States, past and present, has been secured, including a list and a history of most of the diploma mills of the past.

Requests from examining boards and others regarding individuals who claimed to be graduates of foreign institutions led to the securing of a complete list of medical teaching bodies abroad. After efforts extending over a year, our educational department now has a complete list of all such foreign institutions, including catalogues, circulars of information, etc., of every kind.

Incidentally, I believe it can be truthfully said that in no other place in the world is there such complete information regarding the medical teaching institutions of all nations as in the educational department of the American Medical Association. It may be stated, also incidentally, that the gathering of these facts has revealed that the total number of medical schools in the world, outside of the United States, is about 187, while in the United States alone there are 161. In other words, of the 348 medical teaching institutions in all the countries on the face of the earth, one country, the United States of America, has 161, or 42 per cent.

BUREAU OF INFORMATION.

And here I may call attention to what we call the Bureau of Personal Information. While this can not be credited to the Council on Medical Education, it is in part kept up by it. This department includes three things: 1, A list of graduates of all the schools; 2, a list of licentiates of each state, both kept up to date, and, 3, personal information regarding every physician.

The value of a complete list of the graduates of the various schools of the country, together with a list of those licensed in the various states, is very great, and it is not necessary for me to indicate wherein this value lies. Suffice to say that the Association headquarters is fast becoming a recognized clearing-house for information along these lines, and requests for information are continually coming in, not only from this country, but also from abroad. Within the last two weeks a communication was received from Germany asking about a certain notorious diploma mill which at one time existed in this country, the querist stating that some one was parading there as a graduate of that institution. Complete information was furnished.

There is mutual cooperation between the Council and the state examining boards, and through the Council's work the boards are brought into more direct touch with each other. And yet six years ago some of the state board officials hardly knew that such an organization as the American Medical Association existed.

With permanent headquarters and a secretary who devotes his entire time to the work, continued effort is being made and a progressive development is resulting which could not obtain if the work were attempted by voluntary, unpaid committees. In other words, the Council is in position and has the facilities for gathering the information which will make it possible to carry out the original purposes of the Association—the elevation of the standard of medical education in the United States.

MEDICAL LEGISLATION.

Directly related to this educational work is that of medical legislation—in fact, one supplements the other. In the report of the Committee on Reorganization, made to the Association in 1901, it was recommended that a committee be created to cooperate with state committees in securing uniform medical and public health legislation, as well as to represent the profession in all similar matters coming before Congress. The by-laws first provided for a committee of one from each state; time showed that this committee was too large, and later it was limited to three, with a Council of one member from each state, and an auxiliary committee of one member from every county.

Until last year this committee had given its attention to national legislation only, for several reasons, principally because it was without the necessary clerical assistance and facilities to undertake the larger problem. However, on the recommendation of this committee, the House of Delegates, at its last meeting, authorized the establishment of a bureau at the Association's headquarters, to be under the direction of the committee, with a paid secretary to conduct the work. This bureau is now established and actively at work.

The need of uniform legislation along many lines is becoming more and more recognized. Serious complications are continually arising regarding such matters as marriage and divorce, commercial paper and negotiable notes, professional and general education, hygiene and sanitary science and various other matters, national in character, that come under the jurisdiction of the states. Attempts are being made to remedy these conditions. The American Bar Association recently created a committee to act as a central body for the purpose of securing uniform legislation on some of these subjects. An association has been organized, I believe, for the sole purpose of securing uniform laws covering marriage and divorce. Certainly if there is need of uniform legislation in any branch of human activity, it is in that which relates to the health of the people and which regulates the practice of medicine.

MEDICAL PRACTICE ACTS.

However, for us the important proposition is that of remedying the present conditions regarding medical practice. The laws regulating the practice of medicine are chaotic in the extreme and most unsatisfactory. I am not sure that they are wrong who say that it would be better to have no laws than to have the ones we now have. Certainly this might be said regarding the laws in some of the states as now administered, for in some instances the restrictions are a hardship on legitimate practitioners, who have to pass rigid examinations to secure the right to practice, while some of the least worthy, the sectarians and half-educated faddists, get legal recognition without any examination or with a very easy one.

As an evidence of these chaotic conditions, we have in seven states three separate examining boards, and three states have two boards, each with its own standards and methods of examination. In some states there is a single board composed of a certain number of representatives of each of the so-called schools of practice. In others there is a single board appointed without reference to any particular sect or school. There are states in which a license may be obtained on presentation of a diploma, without any examination whatever. There are other states which require both an examination and a diploma, while there are still others, and happily these are few in number, in which any one can be examined and licensed whether he has a diploma or not.

In one state legislation is based on one principle, in another state on another, but in the majority there seems to be a complete lack of any guiding principle or of an intelligent conception of the problems involved. And the medical profession is to blame. There is not a medical law on the statute books of any state that was not put there through the efforts of medical men. This is not implying that they are, in any single instance, just what was wanted; rather they are the best that could be had, usually after more or less compromising. And things are not improving. The profession in one state is endeavoring to secure provisions as amendments to their medical practice act, which in another state it is endeavoring to discard. In the seven years since 1900 thirty-one states have discarded old and adopted new medical practice acts, while during the same time twenty-eight amendments have been passed. There is hardly a session of a state legislature which does not witness the introduction of from one to a half-dozen bills to amend the medical laws.

Now, why all these complications, varied requirements and continued changes? Is it not because there has been no mutual cooperation or co-ordination of effort between the various states, no attempts to utilize the experience of one state for the benefit of the others in a broad way and consequently no mutual understanding or conception of the fundamental principles that must underlie such legislation? Is it not possible that we have been making mistakes in the past through lack of study of the general principles on which such legislation should be based? The desirability of uniformity in legislation is obvious, and the possibility of securing it can not be denied.

The first thing necessary, however, is to formulate a law that will be satisfactory not only to the great majority of the medical profession, but—and this is equally important—to the public as well, for legislation not backed by public opinion can not be enforced. Yet when an attempt is made to draw up such a law, it is found that, as a profession, we have many men of many minds and that there are almost as many different opinions as there are individuals. There becomes necessary, therefore, a more thorough study of the general principles underlying medical legislation, so that there may result some kind of unanimity as to what is required.

THE OBJECT OF MEDICAL LEGISLATION.

What is the object of medical legislation? Is it for the benefit of physicians or for the protection of the public? There is no reason why there should be any special legislation for physicians any more than for any other class of citizens, and for that matter no such legislation has been attempted. We have no right to, neither do we, ask the state for legislation for our sole benefit. The ultimate object must be the public good, and this fact must always be recognized by those who formulate the law.

Should this legislation be restrictive or simply definitive? That is, should it restrict the individual's choice to those whom the law recognizes as qualified physicians, forbidding him to employ whomsoever he pleases, or should the law simply define who are qualified, allowing the individual to employ a qualified man or some one not qualified, as he may desire? This question has not been considered in this country as carefully as it should be, yet it is a fundamental one and underlies all legislation affecting the practice of medicine.

DEFINITIVE OR RESTRICTIVE LEGISLATION?

It is the definitive and not the restrictive principle on which is based the medical practice laws of many countries, Great Britain, for instance. This is the theory that was so ably advocated by Huxley during the agitation regarding medical legislation in England, and which was finally adopted. Huxley said that the state should not dictate to the individual whom he should employ, but that the state had the right, as an employer of medical men, to say who should be known as doctors of medicine and to lay down such conditions as to qualifications as it wishes for those who desired to be classed as such. But, said Huxley, every man has a right to employ for himself whomsoever he pleases and, so long as he does not infringe on the rights of others, he should be allowed to do so, even though he harms himself thereby.

It is not a function of the state to exercise such paternal supervision over the individual of legal age and sound mind as to prevent him from placing his health and his life in the hands of untrained and ignorant men if he is willing to take the risk. It is, however, necessary, Huxley argued, that there should be a recognized legal standard of medical education, since the state in its larger senses requires the services of men with certain recognized qualifications for certain definite functions, such as giving testimony in the courts, acting as inspectors for the state, as quarantine officers, as coroner's physicians, as medical officers in the army, the navy and the civil service, etc. It is, therefore, expedient to have a recognized standard by which the qualifications of these men can be determined. By the recognition of this principle in medical legislation, there would be established a distinction between those legally recognized as qualified and those not so recognized. Only those who are qualified would have any standing in the courts, would be allowed publicly to proclaim themselves as physicians or would have any of the rights and privileges of qualified practitioners of medicine. The individual citizen, however, would be allowed freedom to employ whomsoever he pleased.

This principle, one might think, would be especially applicable in a democratic country, yet it is the opposite, or restrictive principle that underlies the medical laws of most of our states. I do not know whether this definite principle is the best for this country, but I do assert that it should be carefully considered. If adopted it would eliminate the need of legislation for every new fad or sect that might come along.

But there are many other questions. For instance, some advocate that examinations for license should not cover materia medica, therapeutics or methods of treatment. Others vigorously oppose this. Who is right? Should the boards have the power to revoke a license once issued, and on what ground? What shall be required before an applicant may appear before the board? Shall examinations be required in all cases, or shall the diploma be accepted in lieu of an examination? How shall the board be appointed, what shall be its composition and shall it be single or multiple, sectarian or nonsectarian? Shall it be necessary for the physician to register his license in the county? If so, shall one registration be sufficient for the whole state, or must one register again if one removes to another county? This question, which is causing difficulty in one state at the present time, should have been considered at the time of the enactment of the law, and thus the present confusion would have been avoided. Shall the present methods of conducting examinations be continued, or shall provision be made for practical and clinical examinations? On what basis shall reciprocity among the states be established?

These are a few of the questions which come to mind and which must be considered in formulating a law acceptable to the whole country. But before any decision can be reached there must be a clear understanding of the conditions in each state and of the difficulties to be met. The history of medical legislation in each individual state should be studied, so that the experience of the past may be utilized for the benefit of the future.

This is the preliminary work that the Committee on Medical Legislation, through its bureau, is now doing. As a first step it is collating and digesting the medical practice acts of the various states—something never attempted before. It is compiling a synopsis of medical legislation in each state, historically considered. When completed, this will furnish a basis for the study of the subject as it relates to the entire country. An analysis of the decisions of the courts of record of the various states should also be made. This preliminary work is very important as a basis for that which is to follow.

Shall we not approach this great problem in the spirit which should characterize a body of scientific men, by first carefully accumulating our data, reducing our theories to fundamental and essential principles, carefully testing them by comparison with known and proven facts and on this as a foundation, build up a structure of uniform legislation, which shall be equitable and fair to all concerned and which shall possess some of the features of permanency? One of the functions of the Committee on Medical Legislation, with the aid of those interested, is to consider this subject from the broad standpoint of the good of the entire country, to study the principles underlying medical legislation, and, finally, to suggest a law that shall be based on those principles which are found to be just and which shall protect the public against charlatans, frauds and incompetent physicians?

THE AMERICAN MEDICAL DIRECTORY.

The publication of a register of American physicians was one of the subjects taken up by the American Medical Association at its first meeting in 1847. Resolutions looking to the issuance of such a book by the Association have been passed time and again since then. There now has been accomplished that which has been talked about for sixty years, for the Association this year issued the first directory of physicians of the United States that is based on official and not on personal information. The publication of the directory is a part of, and incidental to, the great work of organization and is intimately linked with the other work of the Association. For instance, the information on which the directory is based was being secured for other purposes, and the directory is a means of giving publicity to this information.

In discussing the work of the Council on Medical Education, I called attention to the fact that, among other things, there has been obtained a complete list of the graduates of the medical schools, which makes it possible to verify the school of graduation of every individual whose name appears in the directory; also, that we have a similar list of those licensed to practice medicine in every state. With this information, it became an easy matter to tell whether or not an individual was complying with the law, and was, therefore, entitled to have his name appear in the directory. Thus, with no extra expense, this extremely important data was at hand.

We have other advantages that no other organization, firm or individual could have. For instance:

1. The mailing list of THE JOURNAL, containing over 50,000 names, which necessarily must be correct and up to date, furnishes the correct addresses of over 40 per cent. of the physicians of the country, which is a good percentage to start with.

2. We get newspaper clippings covering everything that relates to medicine and medical men, which, of course, includes removals and deaths. All of this information is obtained independently of the directory, and much of it would otherwise be lost. As it is, all is utilized as fast as it is received, and at all times, therefore, the directory matter is up to date and ready for publication when the time comes to issue another edition.

3. We have over 65,000 biographical reports from physicians, which are being made the basis of a biographical card index for permanent use.

4. We receive reports from secretaries of state societies, which are made up of the reports from the county secretaries (over 2,200 in number) and which include information regarding deaths, removals, new arrivals, as well as regarding membership matters.

When to these advantages is added the fact that the Association has the printing facilities for doing the work, except the binding, and now including the stereotyping of the pages, from a material point of view it would seem that it was justified in undertaking this important publication. And yet what severe criticisms came from certain quarters!

But aside from the material advantages, there were other reasons for undertaking the work. The directories published by outsiders were purely and naturally business enterprises, and, while the information furnished was as reliable as could be had by the methods adopted, it was by no means official. Further, it was not at all pleasant to find the names of veterinarians,

"patent medicine" venders, etc., mixed in, as was a very common occurrence. Neither did it seem quite fair to give some obscure individual half a column, more or less, of personal information, because he subscribed for the book or paid a couple of dollars, when men of standing in the profession, if they did not contribute, were passed over with a couple of lines. But above and worst of all is the fact that the pages of these commercial directories were disgraced with all kinds of quack and fraudulent advertisements.

While the first edition was gotten out under great difficulties, such as naturally come in issuing a new work of this kind and magnitude, and while it contains many errors, the majority of which are due to contradictions and discrepancies in the various records which time did not allow us to sift thoroughly, yet I am sure you will agree with me when I say that it is at least not a discredit to the Association. It is emphatically not a commercial enterprise; this fact will be appreciated as future editions appear.

THE COUNCIL ON PHARMACY AND CHEMISTRY.

From my viewpoint, obtained from personal observation and from being brought into contact with actual conditions, the work being done by the Council on Pharmacy and Chemistry is the most important of all the good things with which the Association is to be credited. However, this subject is too large for discussion here. Further, it is unnecessary to tell you what this work is, for you all know. I shall take time, however, to make a statement or two preliminary to making an appeal.

1. The Council investigates such proprietary medicines as the manufacturers offer for investigation. If on investigation the Council believes the preparations are what they are claimed to be, and if they comply with the rules, they are accepted. A full description of these preparations is published in THE JOURNAL and afterward incorporated in a book, "New and Non-Official Remedies," for easy reference.

2. For obvious reasons, the Council can not take up a preparation for investigation and inclusion in this book unless the manufacturers are willing and submit it for the purpose.

3. This work is primarily in the interest of manufacturers of proprietaries. The majority of them are opposing it—especially is this true of those who put out typical nostrums—and consequently they will not submit their preparations. Even many of the legitimate pharmaceutical houses are secretly opposing this work, and will continue to do so, unless they find it good policy to do otherwise.

4. The work is directly in the interest of physicians and indirectly of the public. Naturally, therefore, if physicians do not cooperate with and support the Council, manufacturers will not. If physicians do support it, the viewpoint of the manufacturers will change.

5. There is one effective way by which physicians can cooperate and change the viewpoint of the manufacturer, and that is by refusing to use any proprietary medicine that is not to be found in the approved list.

And this is the appeal that I want to make to every member of the medical profession of Kentucky: Give this movement your support by refusing to recognize as worthy of your consideration any proprietary medicine that has not been investigated and approved. And in making this appeal I want to assure you that it will not require any sacrifice on your part, nor will your patients suffer. If one in five of the physicians of the United States will do what I am asking you to do, the greatest evil that rests on American medicine will be removed—the curse of the nostrum and the blight of commercialized therapeutics.

It is a simple thing to ask and is easily done. The book, which contains a full description of the recognized articles, can be had for the asking, and a list, without descriptions, costs but a postage stamp. Do not forget that this propaganda is affecting one of the most profitable enterprises of the day, one from which millions of dollars' profits are drawn annually; that linked with it, and a part of it, is the "patent medicine" business, and that these are combined in the opposition.

BOARD OF PUBLIC INSTRUCTION ON MEDICAL SUBJECTS.

The committee appointed in 1906 to consider the advisability of taking up the matter of the education of the public on certain medical matters, etc., brought in an exhaustive report at the Atlantic City session, recommending that a permanent board be created for the following purposes:

To supply the community at large with established facts regarding matters of general moment and public health. To supply these facts ethically, in good taste, and without the element of individual advancement. To harmonize and give the added value of combined effort to the several interests which are now working independently for the common good along medical lines. To direct this work under the auspices of the American Medical Association, thus giving unity of purpose among the workers and public expression to the aim and aspirations of this national Association.

Three separate methods of enlightening the public are proposed:

1. By the publication of articles in the lay press, including daily newspapers and weekly and monthly magazines, such articles to be prepared under the direction of the board.

2. By issuing pamphlets, circulars, etc., on such special subjects as sexual hygiene, venereal diseases, etc., and on such general subjects as typhoid fever, scarlet fever, vaccination, etc. The plan is to print these in large quantities and have them ready for distribution in case of an epidemic or when needed for any purpose. There is an increasing demand for such literature, not only from medical societies for use in public work, but from sociologic workers. Many organizations and societies have provided such literature, but with great labor and expense, whereas through this board the work could be done once, and the circulars, etc., distributed for the use of all at comparatively little expense.

3. By public lectures given under the auspices of county medical societies, literary clubs, college settlements, etc. Some county societies have organized such public lecture courses, but the lecturers are usually handicapped because the material they want for these public lectures is scarce and scattered.

We are continually receiving requests for literature on medical matters of public interest. One correspondent asked for lantern slides to illustrate a lecture on "patent medicines." He wanted to throw on the screen some reproductions of newspaper advertisements, and thought possibly we would know where he could obtain them. At considerable sacrifice he succeeded in getting the slides. It would have been a magnificent thing if in the first place this physician could have been aided, and in the second place if after he had succeeded in get-

ting this material it could have been used by others. The possibilities for public good through this board are almost unlimited and can only be appreciated after thought has been given to the subject.

DR. M'CORMACK'S WORK.

And this leads me to refer to another great work for which the Association should have credit, although I presume Kentucky will claim the credit, because it claims the man. When Dr. McCormack first undertook the work in which he is now engaged it was with many misgivings on his part as to what could be accomplished. Originally, his work was to encourage organization and a better feeling among the members of our profession, to stimulate them to more active scientific work, to build up county societies, etc. But it was not long before his work broadened out, and to-day the most important part of it are his addresses to the public. In these he is doing a work that is invaluable, for he is not only enlightening the people on matters with which they should be acquainted, but he is bringing the profession and the public, and the profession and the newspapers closer together, with the result that there is now cooperation where before there was antagonism.

The good that he is doing is reflected in the newspapers in places where he has visited. We get clippings of all such matter, and I doubt if Dr. McCormack himself knows how often his addresses are referred to by the newspapers for weeks after he has left the community—always favorably. It is a pity that his splendid work could not be followed up in localities where he has spoken; it is a still greater pity that there are not more McCormacks to put into the field.

POSTGRADUATE WORK.

One of the most perplexing problems in the organization work is that of making the county societies more effective for good to their members, and where this problem is not solved it too often results in such organizations becoming societies in name only. A few county societies in some of the states are doing magnificent work, while in similar instances in the same states, with as good or even better membership, the societies are failing. This is not because the officers are not striving and anxious to have successful meetings, or because there is not good material, but because they do not know how. Here and there societies outline their work for the year; they have systematized it; they cover a certain definite subject in all its ramifications and when the year's work is finished they have accomplished something. Others do nothing of the kind—hardly do routine work.

This is a large subject—this of making a society of more value to its members—too large to go into now. Suffice it to say that for a long time it has been appreciated that assistance and cooperation by others is needed if the societies are to be made what they ought to be, means of advancement in scientific knowledge. Such assistance and cooperation is at last offered. The work has been taken up under the direction of the Committee on Organization through the establishment of the postgraduate course. As this is being conducted by a member of your Association, and as it has been dwelt on in your own journal, it is not necessary for me to enlarge on it. It is in the experimental stage, but I am sure it will develop and become of immense advantage in the encouragement of scientific work. Just how this development will take place I do not know. Possibly it may be necessary in the near future to supplement the outlining of the course with aids in the form of pamphlets, manuals, etc., that shall supply information, references to literature and other aids to the study of subjects outlined. Possibly in time the Association—perhaps in cooperation with state societies—may have to put men into the field to give lectures and demonstrations on subjects that need personal instruction—information that can not be obtained from text-books—thus actually taking postgraduate school instruction to the doctor's door.

To repeat, this work has just begun. What we must do is to encourage those who have undertaken it and assist in its development, no matter where it may lead. I believe that this method of encouraging postgraduate work is the beginning of a new era of progress in scientific work, of better thinking and of better doing.

OTHER EFFORTS.

I have mentioned only a few of the things that are being done under the auspices of the American Medical Association. Other things might be referred to, such as the fight against the reduction of the insurance examination fees. Here, as in so many other things, Kentucky deserves credit more than any other state; for your association not only opened, but led the contest which terminated in victory. Probably nothing has occurred that shows what organization means as much as this successful resistance to the action of the insurance companies when they, without considering or consulting their examiners, reduced the examination fees 40 per cent. Five years ago this reduction would have stayed where the combination of insurance companies put it.

Of a different nature is the encouragement of medical research by an annual appropriation and last, but by no means least, is the great work that is done by and through the various scientific sections of the Association.

REASONS FOR PRESENT SUCCESSFUL EFFORTS.

This review shows that there is being accomplished that which has not been possible in the past. Why? Why are things being actually done that were only talked about previous to the last five or six years?

First, the reorganization. The House of Delegates of the American Medical Association is a body sufficiently large to represent the profession of the whole country, and yet small enough to transact business in a deliberate manner, to give time to the discussion of various questions that come before it. This change brought the state societies more directly in touch with each other and with the Association than was possible under the old plan. The state societies appreciate that now they are not theoretically, but actually a part of—in fact, constitute—the American Medical Association. Hence, more hearty cooperation. Similarly it has federated the country societies and has brought them to a realization of the fact that they are a part of and constitute the state societies. In other words, we have a compact organization made up of some 75,000 of the best physicians of the country, with a central body to carry out the purposes and desires of these 75,000 members.

Another and more important reason is that the Association has the wherewith to do things. Without money the Committee on Medical Education, on Medical Legislation and the Board of Public Instruction could do no more than similar committees of the past. The postgraduate work and the various plans for the development of organization that have been carried out; the Council on Pharmacy and Chemistry and the well-

equipped chemical laboratory in the Association's headquarters, with practical chemists in charge, have been made possible because the Association has the means to support these enterprises.

Another important factor is THE JOURNAL of the American Medical Association, which, with its immense circulation, makes it possible to carry the propaganda for better things to over 50,000 of the representative physicians of the United States every week.

WHAT THE ASSOCIATION STANDS FOR.

Finally, to answer the question, What does the American Medical Association stand for? I reply:

It stands to-day, as it has stood for sixty years, but now in an entirely practical way, for a higher standard of medical education, for a gradual elevation of this standard until the physicians of the United States shall equal in scientific attainment, as they equal in intellect, the physicians of any other nation on earth.

It stands for uniform legislation in all the states; for a law based on principles adopted after careful scientific study of the problems involved, that shall be equitable and just and that shall make possible rational reciprocity among the states.

It stands for, and in the future will insist on, honesty and business integrity and against fraud and deception on the part of those who supply physicians with medicinal agents.

It stands for the development of a national, state and local sanitary system that shall be based on scientific knowledge; for the protection of public health; for enlightening and directing public opinion in regard to the problems of personal hygiene, and for securing the cooperation of an enlightened people in suppressing quack medicines and quackery.

In a word, without a selfish motive, the American Medical Association stands for honesty and fairness and unalterably and eternally against fraud and deception in all that relates to the health and to the physical welfare of the people. And especially it stands for the individual doctor, whether he lives in the greatest of our metropolitan cities or in the remotest mountain hamlet. It stands to help him, not only to become a better physician, but to protect and promote his every interest—scientific, social, moral and material—so that he may give better service to those who depend on him in their time of affliction, and also that he may stand in his community as a beacon light, a great scientific and moral leader of his people. These are the principles for which the American Medical Association stands, and it is only a question of time when it will receive the cordial support and earnest cooperation of every intelligent, right-thinking member of our profession in carrying out these principles.

Criminal Carelessness in Spreading Whooping Cough Infection.—Akerblom relates some instances of which he has personal knowledge where a physician ordered change of air for some children with whooping cough, the result being the infection of all the children in the village to which they were taken. In one village, 10 of the children died from bronchopneumonia consecutive to the whooping cough, and others from phthisis. He entitles his article in the *Therapeutische Monatshefte*, for September, "A Question of Conscience for the Physician," and urges physicians to think twice before sending a child with whooping cough to scatter infection. He remarks that the whooping cough was not aborted by the change of air in any instance, but ran its usual course unmodified.

THE FERMENTS OF MILK AND THEIR RELATION TO PASTEURIZATION.*

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NEW YORK CITY.

The prevailing idea concerning the treatment to which cow's milk should be subjected before feeding it to an infant has changed rapidly during the last twenty years just in proportion as our knowledge of milk and its constituents has been obtained. Twenty years ago many infants were fed on raw milk and, as the laity often remarks to us, many of these infants survived. But, as we well know, a very large proportion died; in New York at that time about one-third of all infants born died within the first year.

At that time the science of bacteriology was being developed and the bacteriologic examination of milk demonstrated a shocking contamination of this fluid with bacteria.

The great infant mortality is largely due to the summer diarrheas of infancy, and it was naturally assumed that this was probably due to the contamination of milk by bacteria and that the feeding of sterilized food might diminish materially this mortality. Heating to a boiling point the milk used for infant feeding then became customary to the general practitioner, while in some cases such heat on two successive days, in order not only to kill the bacteria but the spores also, was adopted. While this practice reduced very materially the infant death rate (in New York it was reduced from 33 per cent. to 16 per cent. in ten years), there developed about 1890 a feeling in the profession that these children fed on cooked milk did not really thrive as well as those fed on raw milk, although they did ordinarily escape the summer diarrheas.

In 1892 it became evident that a temperature of 176 degrees F. for twenty minutes was sufficient to kill the bulk of the bacteria in milk as well as those pathogenic bacteria which we feared in milk, the most resistant of which is the tubercle bacillus, so that in that year the adoption of such pasteurization began, with many practitioners, to take the place of the previous sterilization at boiling point.

It was, however, known that certain chemical changes took place in milk subjected to this temperature. Some sugar was converted into caramel, some of the proteids were thought to be rendered less digestible, while a change in the taste indicated a real chemical alteration.

Further experiments to test the thermal death point of the tubercle bacillus made it evident in 1896 that a temperature of 155 F. continued for thirty minutes was sufficient to destroy this organism, while at the same time it destroyed the bulk of the bacteria present, so that at this time this lower temperature continued for a longer time was generally adopted for pasteurization.

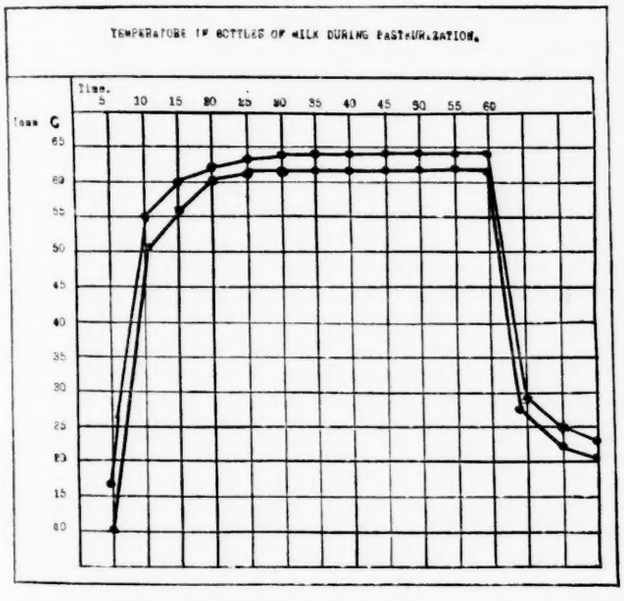
Many of the physicians practicing pediatrics in this country had come firmly to the conclusion, however, that clean, raw milk was altogether the best food, and the development of the "certified milk" movement having secured such milk for many of our large communities, such raw milk came into fairly general use. Pasteurized milk, however, was almost universally used in summer. At the same time the recognition of scurvy as a not uncommon disease of infancy, usually associated with defective feeding and rarely accompanying the feeding of

* Read in the Section on Diseases of Children of the American Medical Association, at the Fifty-eighth Annual Session, held at Atlantic City, June, 1907.

undiluted raw milk, gave a still greater impulse to the use of raw milk in infant feeding.

Other means of securing sterile milk without the subjection to heat have since been advocated. The filtration of milk, the addition of formaldehyd or peroxid of hydrogen, the use of the electric current, or the ultraviolet rays, have all been advocated but have been fairly uniformly discarded because of inefficiency, expense and the objection to the introduction of some foreign substance into milk, or on account of the modified character of the milk as a food.

Recent study of milk has developed many facts which alter our ideas. The chemical changes which were said to take place in milk at 176 degrees F. have since been said, by some observers, to occur at lower temperatures; thus Sebelien notes changes at 161-176 F. (72-80 C.), while Schlossmann states that at 156 F. (69 C.) a diminution of the solubility of albumins takes place. Solomin says that fifteen minutes at 140 F. (60 C.) causes the coagulation of albumin to begin. We have, moreover, learned that milk is not an inert liquid and simply a food, but that it has real biologic qualities. We know that it may contain the toxins and antitoxins of



tetanus and typhoid, the toxins and agglutinins of typhoid fever and toxins of tuberculosis. It is also believed to have bactericidal action.

At the International Medical Congress at Paris in 1900 Escherich called attention to this phase of the problem. He was not satisfied that the more ready digestibility of the proteid of mother's milk as compared with cow's milk accounts for the great superiority of mother's milk as a food. Moreover, infants fed on cow's milk, if given a very little breast milk in addition, digest the cow's milk perfectly when without the breast milk they can not digest it. He, therefore, argued that the breast milk must contain substances that aid such digestion, that is, ferments. Moreover, the babies in whom the digestive ferments of the intestinal canal are deficient, the marasmic and premature babies, may often be successfully fed on breast milk after failure with other foods. This absence of digestive fluid in cases of marasmus has lately been demonstrated by Edsall of Philadelphia.

The ferments of breast milk have since been studied by many observers, as have other reactions of milk. Spolverini of Rome, stimulated by this statement of Escherich, has undertaken extensive investigations to determine the ferments present in milk and to answer certain interrogations by Marfan, who stated that after it had been proved that milk contains soluble ferments, it remained to prove whether these soluble ferments were specific and exclusive for each species of animals. Second, he asked: If they are specific, is this the reason for the superiority of breast milk? Third: If they are not specific, would it be possible to produce the same ferments in different species of milk? Fourth: If they were made spontaneously or artificially, would not these ferments be destroyed by heat? These important questions have been partly answered by the test work of Spolverini and partly by certain work of Hippius, which I shall quote later.

Bechamp first demonstrated the presence of diastatic ferment in mother's milk. This observation was confirmed by Bouchut and Moro, and this ferment was not found in cow's milk. Marfan and Gillet later found a saponifying ferment in woman's milk which was also present but less active in cow's milk. Nobécourt and Merklen found a salol-splitting ferment in woman's milk. This was also found in the milk of the dog and ass, but not in that of the cow or goat. Luzzatti and Biolchini found in woman's milk an amylolytic ferment which was very active; this was not present in the milk of the cow or goat. They also found a fat-splitting ferment, more active in woman's milk, less active in that of cows and goats. Spolverini found both trypsin and pepsin ferments, but this observation has been denied by Benoit, who repeated his experiments.

In summarizing the work presented by Spolverini we find that all the ferments which have so far been found are present in the milk of women and dogs, that is, in milk of omnivorous animals. The milk of the cow and the goat, which are herbiverous, contain all these ferments except the amylolytic and salol-splitting. To ascertain whether these ferments are specific and exclusive for each species Spolverini fed dogs, in which, as I have said, all these ferments are present, on a strict vegetable diet for twenty-two days. During this time the amylolytic ferment became much less active while the salol-splitting ferment showed no special depreciation. On the other hand, a goat whose milk showed no amylolytic or salol-splitting ferment, after being fed for sixty-five days on a mixed diet, secreted milk in which both salol-spliting and amylolytic ferments were present.

Spolverini tried to answer Marfan's third question as to the possibility of obtaining milk from cows or goats which contains the same ferments as woman's milk, and fed both a goat and a cow on germinating barley, after which he found not only starch-digesting ferment in the milk but also salol-splitting.

Marfan's fourth question concerning the effect of heat on these ferments has been carefully worked out by Hippius. The salol-splitting ferment found only in mother's milk was weakened by a temperature of 131 F. (55 C.) and destroyed by 149 F. (65 C.), while the amylolytic ferment found only in mother's milk was weakened by a temperature of 158 F. (70 C.) and destroyed by 167 F. (75 C.).

The fat-splitting ferment present in mother's milk and less active in cow's milk was weakened by a temperature of 145 F. (63 C.) and destroyed by 147 F. (64 C.)

The oxidizing ferment is destroyed by one minute at 169 F. (76 C.), while the proteolytic ferment is destroyed only by boiling.

Two other biologic characteristics of milk were also tested for the effect of heat by Hippius; the bactericidal, including, according to von Behring, the alexins, was found to be weakened by one-half hour at 149 F. (65 C.) or two minutes at 185 F. (85 C.), and destroyed by boiling, while lactoserum was uninjured by 248 F. (120 C.) for one hour.

THE EFFECT OF HEAT ON CERTAIN BIOLOGIC CHARACTERISTICS OF MILK AS DETERMINED BY HIPPIUS.

1. *Present in Woman's Milk and not present in Cow's Milk.*

	Unchanged by	Weakened by	Destroyed by
Salol-splitting ferment.	.....	131 F.	149 F.
Amylolytic ferment.	{ 1 hr. at 140 F. / ½ hr. at 149 F.	158 F. short time.	167 F.

2. *Present in Woman's Milk and present but less active in Cow's Milk.*

	Unchanged by	Weakened by	Destroyed by
Fat-splitting ferment.	143 F.	145 F.	147 F.

3. *Active in both Woman's and Cow's Milk.*

	Unchanged by	Weakened by	Destroyed by
Proteolytic ferment.	{ 1 hr. at 140 F. / ½ hr. at 149 F.	.....	Boiling.
Oxidizing ferment.	1 hr. 140—149 F.	.....	1 min. at 169 F
Bactericidal action.	.....	{ ½ hr. at 149 F. / 2 min. at 185 F.	Boiling.
Alexins according to Von Behring.	.....	{ ½ hr. at 149 F. / 2 min. at 185 F.	Boiling.
Lactoserum.	.....	{ ½ hr. at 149 F. / 1 hr. at 248 F.	

After a study of the most recent observations of the result of heat on the chemical composition of milk and on ferments and other biologic properties, it seems evident that, if sufficient for the purpose of destroying bacteria in milk, a temperature of not much more than 140 F. (60 C.) should be used. Such a temperature will scarcely alter the chemical composition; it will not injure the ferments existing in cow's milk, and it only remains to discover its efficiency to destroy the bacteria we fear in milk.

The most recent observations made on the thermal death point of the tubercle bacillus, the most resistant species that we fear in milk, indicates that a temperature of 140 F. (60 C.) for twenty or thirty minutes is sufficient to destroy tubercle bacilli occurring in milk, unless they are enveloped in thick mucopurulent material, such as sputum, or are protected by a film formed on the surface of the milk. Such conditions are not likely to occur in sealed bottles of properly handled milk from healthy cows. It has, therefore, seemed to me advisable and safe to advocate the pasteurization of milk at not less than 140 F. (60 C.) for forty minutes. Such milk is unaltered in taste and retains the ferments and biologic characteristics of the milk unimpaired. It is not subjected to chemical change and is certainly much safer than any raw milk at the present stage of the development of dairy hygiene in this country or abroad.

The apparatus for the pasteurization of milk which I devised some years ago I have so modified as to pasteurize milk at a temperature just above 140 F. for forty minutes.

CONCLUSIONS.

1. Milk for infant feeding should be pasteurized so as not to interfere with its biologic properties or chemical composition, but at a sufficient temperature to destroy the bulk of the bacteria present, including the tubercle bacilli.

2. A temperature of 140 F. (60 C.) continued for forty minutes would seem to fulfill this condition.

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POTENTIAL AND ACQUIRED STATIC FLAT FOOT.

ITS ETIOLOGY, SYMPTOMATOLOGY AND NON-OPERATIVE TREATMENT.

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CHICAGO.

The impression that flat foot is a very rare condition is almost universal, even among medical men. This, however, is erroneous; on the contrary, it is a very common affection, just how common it is impossible to tell, because the patients in only a relatively small proportion of all cases ever come to the physician for treatment, and of this small number probably only a small percentage are correctly diagnosed.

Absolutely conclusive statistics on this point either do not exist, or I have been unable to find them. In Munson's[1] work we find the statement that of 9,901 members of the Illinois National Guard who offered themselves for the United States service in 1898, 33, or 3.3 per thousand, were rejected because of excessive or painful flat foot. All of these had previously passed the physical examination required to enter the State Militia. How many were rejected during this first examination is not stated, nor is there any record of how many of the remaining 9,868 suffered to a minor degree from this affection.

From the Surgeon General's office I was able to obtain the following statistics: During the years 1903, 1904 and 1905, 132,145 men were examined for the United States Army. Of this number 457, or 3.4 per thousand, were rejected because of excessive flat foot. These figures include all men who were examined for re-enlistment and do not take account of those suffering from flat foot who were rejected for some major trouble. For instance, an applicant suffering from hernia and flat foot is, of course, rejected, but the cause of his rejection is given as hernia. In addition, only reasonably able-bodied men apply for examination, as a rule, and, although our statistics tell us that of every 10,000 adult males 34 suffer with painful or excessive flat foot, I believe that, in view of the above defects in the statistics, we are justified in concluding that a very much larger proportion of our population is suffering from this condition. Of the 17,619 surgical cases of the Munich Surgical Polyclinic,[2] 338 of the patients, or 1.9 per cent., suffered from flat foot. It is, next to scoliosis, the most common deformity coming under the care of the orthopedic surgeon.

ETIOLOGY.

Though never fatal, it causes much discomfort, considerable pain and not a little incapacity, varying in degree from slight temporary functional impairment to complete, more or less permanent disability. The development of flat foot is the consequence of a disproportion existing between the strength of the foot and the strain to which it is exposed. Anything which weakens the foot or which exposes the foot to excessive strain predisposes to flat foot, and if either or both of these features persist long enough or are sufficiently severe they will ultimately result in the production of this condition.

Among the more common factors which cause a weakening of the foot may be mentioned trauma, such as

1. Munson: Military Hygiene, page 32.
2. Hoffa Albert: Lehrbuch der Orthopadischen Chirurgie, p. 789.

sprains and fractures, rachitis, rheumatism, gout, arthritis deformans, paralysis, general muscular weakness due to acute disease or to insufficient or improper exercise, special muscular weakness, such as that of the tibialis anticus and posticus. The excessive strain may be due to the result of excessive weight-bearing due to obesity or to almost any physical overwork, but especially long-continued standing, as that required of bakers, barbers, bartenders and others, and then more especially if they are in the habit of assuming the "attitude of rest" so well described by Annandale. This attitude places the foot at a great mechanical disadvantage and thus, relatively at least, increases the strain to which it is exposed.

Similar to this is the effect of deformities in other portions of the body, such as scoliosis, hallux valgus, corns, ingrown toe nails and knock-knee. The excessive and persistent strain to which most feet are subjected by ill-fitting shoes and stockings must not be lost sight of. John A. Sampson[3] has brought this out most clearly in his excellent article. The greatest fault about our shoewear is that almost all of our shoes are too low on the inner side over the instep, and thus constantly tend to force the foot into abduction by lateral pressure and to break down the arch by pressure from above. This is well shown by Figure 1, which shows the normal height of the instep and the height of its corresponding shoe. It is further proven by the fact that a great many people have corns on their small toes because these toes are constantly being crowded against the inner surface of the outer border of the shoe.

There is one factor in the production of flat foot which I feel certain is of very much greater moment than is usually conceded. I refer to the lack of correlation between the strength of the muscles and tendons and the weight of the body which occurs at the time of puberty. F. Peterson[4] says the body gets heavier at this time, the muscles get longer, but not correspondingly thicker. Stanley Hall[5] makes the statement that during puberty the different structures grow with different degrees of rapidity. Besides, is it not more than likely that this phenomenon is akin to the breaking of the voice, and here we assume that it is partly due to the lack of adjustment between the nervous system on the one hand and the muscular and osseous system on the other.

SYMPTOMS.

Clinically one can easily trace the appearance of the first symptoms to the time of puberty in a large majority of cases. Statistics naturally differ somewhat, but all those I have seen show that a very large percentage of patients present themselves for treatment about or shortly after puberty. Royal Whitman[6] says 57.3 per cent. come for treatment between 10 and 25 years of age. Hoffa[7] says 61.6 per cent. between 11 and 25 years of age, while the same author gives 50.7 per cent. between 16 and 25 years of age. What percentage of those who come for treatment later developed the symptoms shortly after puberty is not stated.

The first change that usually occurs in the development of static flat foot is relative general muscular weakness, accompanied by more pronounced weakness of special muscles, such as the tibialis anticus, tibialis posticus and short plantar muscles. This throws excessive strain on the fascia and ligaments, which is followed by their stretching, causing a rotation of the bones with a change of their axis and weight-bearing surfaces, which must sooner or later result in a change of their shape. If now the opposing muscles in their attempt to immobilize the painful member become hypertrophied, rigid and spastic, we have the most troublesome condition, so-called rigid flat foot. If, however, this hypertrophy of the muscles does not occur and the causative factors are not removed, we will get the complete breaking down of the arch, robbing the foot of all of its elasticity. This sequence is by no means universal, but certainly very common, and I have frequently seen all of these stages and have been able to follow one stage after the other in the history of some of these cases.

The correct diagnosis in each individual case is, of course, of prime importance, because unless this is made many patients will necessarily be wrongly, or at best unsatisfactorily, treated. In order to accomplish this, each patient must be carefully and painstakingly examined. The snap-shot diagnoses from across the street, though they are sometimes correct and may appear brilliant to the layman, are not to be countenanced. A diagnosis of chronic rheumatism from across the room is much more apt to be wrong than right. I would not call attention to this matter at all if a considerable percentage of my patients had not given me a history of having been diagnosed as chronic rheumatism, some of them without ever having been asked to remove their shoes and stockings. Rheumatism is responsible for enough human ills without being wrongly accused of a lot of things for which it is not to blame.

The calf cramps so often complained of during puberty are usually nothing more or less than early flat foot pains. Other incorrect diagnoses are neuralgia, bunions, corns, Morton's toe, anterior poliomyelitis, osteomyelitis of the os calcis and occasionally even tubercular arthritis. If we will study each case carefully and keep in mind the signs and symptoms given below, mistakes need rarely occur.

One reason why so many mistakes have been made in the diagnosis of this condition is to be found in the faulty nomenclature which has been employed. None of the terms, such as flat foot, weak foot, splay foot, pes valgus, or pes flexus pronatus reflexus of Henke, adequately express the condition. I have, therefore, introduced the word potential, calling the whole symptom-complex potential and acquired static flat foot.

In the potential and milder cases the patient usually complains of a sensation of fatigue, weakness and discomfort even on slight exertion with a tired feeling, especially on the inner side of foot or ankle and a dull ache of the calf with or without pain in the knee, hip and lumbar region. According to Helbing,[8] the very first and never-failing sign in flat foot is the outward deflection from a perpendicular of the lower end of the tendo Achillis when weight is borne on the foot (Fig. 2). I have always found this sign present in those of my cases in which I have looked for it. Among the other signs and symptoms, coldness, numbness, cyanosis, increased perspiration of feet, atrophy of tibialis anticus and posticus, the loss of springiness in walking, resulting in the peculiar shambling gait, may be mentioned.

As the cases become more severe we find marked pronation or eversion and abduction with the loss of concavity on the inner aspect of the foot, loss of arch and

3. Proper Foot-wear and the Treatment of Weakened and Flat Feet by Mechanical Devices for Maintaining the Adducted Position.
4. Zum Mechanismus des Platt Fusses. Arch. klin. Chir., lxix.
5. Psychology of Puberty.
6. A Treatise on Orthopedic Surgery.
7. Orthopædische Chirurgie, 1902.
8. Aus dem Gebieten der Ortho. Chir., March 27, 1905, p. 368.

a loss of proper relation between the axis of the leg to the foot. Instead of the axis of the leg striking the foot midway between the malleoli, it passes further and further inward until in some very severe cases it may pass internal to the internal malleolus, thus giving us the extreme prominence of the latter as a very common sign. With the progressive deformity we get muscular rigidity and the consequent reduction in the range of motion of the foot, especially that of normal adduction. Muscular rigidity seems to me to be an attempt of Nature to immobilize the painful foot and, by securing rest, relieve pain, and as the abductors and pronators are now at a mechanical advantage, the deformity must become more and more pronounced the longer the rigidity persists.

We come now to the question of pain, the discomfort in the inner side of the foot, calf muscles, etc., having already been alluded to. The three characteristic points of pain are, first, the inner border of the foot where the tuberosity of the scaphoid and the head of the astragalus make pressure on the calcaneo scaphoid ligament. In severe cases the bursa which forms here may become inflamed and the pain at this point may be excruciating. Second, the middle of dorsum of foot where the scaphoid impinges on the neck of the astragalus. Third, just in front of external malleolus because of the friction between the external malleolus and the astragalus due to the changed relation of these bones. Sometimes in addition there is pain over the plantar surface of the heel and also at the ball of the foot at the metatarso-phalangeal junction.

Well-made imprints of the sole of the foot are often of great help in making a diagnosis and of interest in watching the progress of the condition, but we must not forget that there is no direct relation between the sinking in of the arch and the severity of the symptoms or the degree of the disability. A beginning flat foot may be so painful as to incapacitate the patient from all work and show almost no loss of arch. We must ever remember that "flat foot is a compound deformity in which the abnormal relation in foot and leg, causing the improper distribution of weight and strain and disuse of normal function, is of vastly greater importance than the depression of the arch which has given the name to the disability."[6] A copy (Fig. 3) of the now classic Volkmann flat foot imprint is introduced here, not so much for the purpose of urging its use in making a diagnosis of the condition as to emphasize what has just been said, namely, that a beginning flat foot such as would make imprint B (Fig. 3) may be much more painful than a fully developed flat foot such as would make imprint D (Fig. 3) or even a potential flat foot, the imprint of which may not differ in the least from the normal imprint A (Fig. 3) may cause much more discomfort than a fully developed flat foot.

TREATMENT.

The good old times when every abdominal pain was treated by a liberal potion of blue mass, irrespective as to whether the pain was due to green apples or strangulated hernia, passed never to return about twenty-five years ago. The time when every pelvic disorder was treated with a glycerin tampon ended about fifteen years ago, while the treatment of all cardiac troubles by the routine administration of digitalis has not been in the best repute for the last five years, and we hope the time will soon come when flat foot patients will no longer be sent to the instrument maker or shoe dealer with the direction to get a ready-made pair of steel insoles.

There is more similarity between these comparisons than one would be led to believe at first sight. The ordinary ready-made flat foot insoles are not even quite as sure to cure flat foot as blue mass is to cure abdominal pain. They may, and sometimes do, improve the symptoms somewhat, but for each case in which they are a benefit there are at least two cases in which they distinctly aggravate the condition. Prescribing ready-made flat foot plates is about as sure an evidence of slovenliness of thought and action on the part of the physician as was the old universal tampon. The comparison goes still further. If one simply tries to relieve the loss of arch of the foot without treating the whole patient one will be about as successful in treating flat foot as was the old-time physician in giving digitalis as a routine measure without looking after the exercise and general hygiene of his heart patients.

There are many excellent methods of treating flat foot, but I should like to give in detail a method which has given very satisfactory results in my hands and which I have used almost exclusively for the past nine years. The method was very briefly alluded to in a paper which I read before the Illinois State Medical Society six years ago.

To begin with, it is very important to look after the general hygiene of the patient, since flat foot is the expression of a disproportion between the strength of the patient and the strain to which the foot is exposed. If the strain is excessive it may be necessary to reduce the weight of the patient or to change his occupation for a time at least. If the subsequent directions are carefully followed it will only rarely be necessary to change the occupation permanently.

The general muscular development usually requires our first attention. This can be best accomplished by prescribing appropriately selected, definite physical exercise. Simply telling the patient to take more exercise is about as useless as telling a patient to take medicine. Unless the direction is definite as to the kind and amount of exercise, the patient makes a few unsuccessful attempts and then gives up in despair. If the directions are exact I have found the patients very willing and glad to follow them to the letter, more especially as they soon experience great benefit from them. For this purpose it is well to give them some definite outline. There are many excellent guides for this purpose. I have found a little book by Schreber very convenient and useful. The next important point is to train the special muscles, especially the tibialis anticus and posticus. For this purpose I have employed the special exercises recommended by Hoffa and others. They can usually be made a part of the general exercises mentioned, and fifteen or twenty minutes a day devoted to to these exercises will be sufficient in any case of flat foot.

In this connection one must never forget to teach the patient how to walk. If one will teach a flat foot patient to walk and stand with the feet parallel or nearly parallel, half of the battle is won and many of the simple cases will derive marked benefit from this procedure alone, because it overcomes to a great measure the tendency to eversion and abduction. There is a false idea prevalent that toeing is graceful. This common belief has its origin to a large extent, I believe, in the Infantry Drill Regulations adopted by the United States Army and consequently copied largely by the National Guards and Military Schools. This directs

that the recruit at attention stand with his "feet turned out equally, and forming with each other an angle of about sixty degrees," while it would be very much better if the directions read that he stand with his feet turned out equally and forming with each other an angle not to exceed sixty degrees.

This would give the soldier the privilege to use his feet to the best advantage. I remember very distinctly

Fig. 1.—Showing how shoes tend to force the foot into abduction by lateral pressure and thus break down the arch. Dotted line, outline of foot; solid line, outline of shoe.

Fig. 2.—Showing one of the first signs of flat foot: The outward deflection of the lower end of the tendo Achillis when weight is put on the foot.

while compelled to take military drill at our state university that it was a distinct hardship for me to try to walk with the feet thus everted, and I am very glad now that I never made any great effort to accomplish it, as it distinctly favors the production of flat foot. I have watched very carefully and so far have never come across a patient suffering from flat foot who habitually stood and walked with his feet nearly parallel.

Careful attention to the kind of shoes worn is of the greatest importance. As above stated, the greatest fault with our shoes is that they force the foot into abduction, and in people with high instep many shoes make a continuous pressure over the instep, thus directly tending to destroy the arch of the foot. This can be avoided by having the shoes made over a special last made after a plaster-of-paris model of the foot. The model should be made with the foot held in slight adduction and supination. The extra expense is slight and the money expended for this purpose well invested.

I now wish to call especial attention to the method of strapping which I have used in all my cases during the past nine years. I go into considerable detail at the risk of becoming tedious, as I am thoroughly convinced that the success of the method depends very largely on the accuracy with which it is done. The following directions have but one object in view and that is to use the adhesive plaster to the greatest advantage. A system of strapping which utilizes say 95 per cent. of the adhesive quality of the plaster is many times more efficacious than a method which utilizes only 75 per cent.

First I select a good make of zinc oxid adhesive plaster in twelve-inch rolls, I then measure the patient's leg

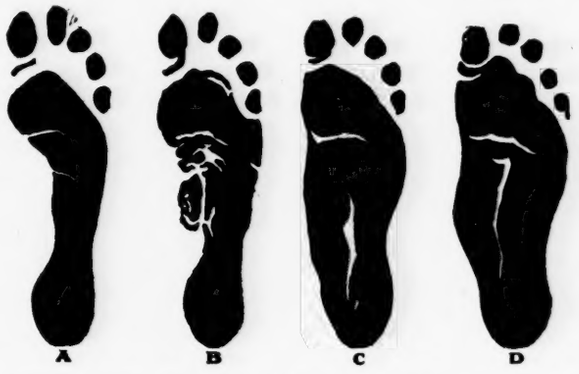


Fig. 3.—Reproduction of the Volkmann flat-foot imprint showing varying degrees of arch destruction, from slight at B, to extreme at D.

and mark off the adhesive straps according to the size of the extremity. For the purpose of strapping an adult male patient's foot of ordinary size I mark off seven strips ½ inch wide by 32 inches long with a cross line at its middle, sixteen strips ½ inch by 8 inches, one piece 3¼ inches by 13 inches, one piece 3¼ inches by 12 inches, one piece 3¼ inches by 11 inches, and four pieces 3¼ inches by 8 inches (Fig. 4). I do this as a matter of convenience and also to prevent the unnecessary handling of the adhesive plaster after the facing is once removed. Plaster can easily be robbed of one-half of its adhesive strength by handling a few times with perspiring, oily hands or by sticking onto a dusty wall or by allowing its adhesive surface to come in contact with particles of cotton.

The heel of the patient's disrobed foot is now placed on a chair, with the knee flexed and with a short hard roller bandage looped around the foot I direct the patient to draw the toes upward, thus placing the foot at a little less than a right angle to the leg, at the same time having it moderately inverted and adducted (Fig. 5). I find that the patient himself can do this much better than any assistant.

I now put the middle of the middle of the thirty-two by one-half inch strap over the bottom of the heel about

one inch from its posterior border, place one-half up the outer surface of the leg without tension and the other up the inner surface of the leg, applying this as taut as I can. I then place one of the short, narrow straps on the inner surface of the foot parallel with the sole and one on the outer surface. The remaining narrow straps are then applied in the same manner, each one slightly overlapping its predecessor. When these are all in place I cover them with the remaining seven straps, beginning at the upper end of the leg, as illustrated in Figures 6 and 7.

These straps will remain in place and be effective for from four to eight weeks, when they may be removed in the evening with benzine, the foot washed with soap and warm water, carefully dried, and the foot restrapped the next morning. This can be repeated until a cure is obtained, which may require from two to ten strappings. The relief is almost immediate, and I have had more than one patient shamble and even hobble into the office who walked out much more sprightly and greatly relieved.

I do not wish to be understood as claiming anything new or extraordinary in this method of treatment, as I am well aware that Drenkhahn[9] mentions the use of adhesive plaster as early as 1899, and Shanz,[10] Breyer,[11] and Whitman[12] since then.

The first three give it as their opinion that adhesive plaster strapping in flat foot is ineffective. The only way I can explain this is that they were all Germans and German adhesive plaster is universally bad. It does not stick and is very irritating to the skin, consequently not adhesive plaster strapping, but the adhesive plaster they used, and possibly their mode of application should be blamed for the poor results they obtained. I am very glad, indeed, that I had employed the method over a year before the first of these articles was published and several years before they came to my notice, otherwise I might have been deterred from developing it. I have proven to my complete satisfaction that it is a very valuable method, and in the nine years that I have used it it has almost never failed me. All cases which have persisted faithfully have been greatly or completely cured.

I do not want to be understood as claiming that the method above outlined will cure all cases of flat foot, but I do believe that it will relieve all or nearly all cases of static flat foot and that in many it will not only effect a symptomatic cure, but if not too far advanced, a more or less perfect anatomic cure. I did not believe this myself until one day a young man with a double

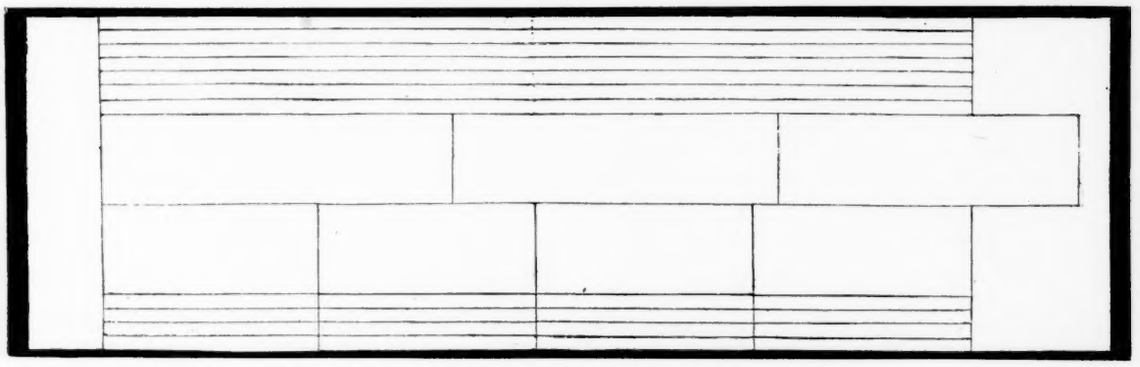


Fig. 4.—Showing how the zinc oxid plaster is marked off preparatory to cutting strips for strapping an adult male patient's foot.

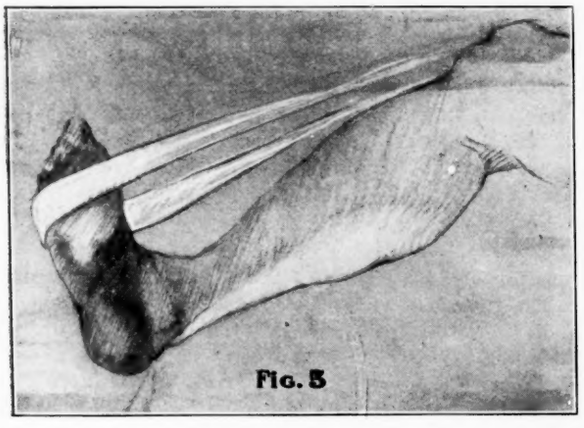


Fig. 5.—Showing method of having patient put traction on the foot preparatory to strapping.

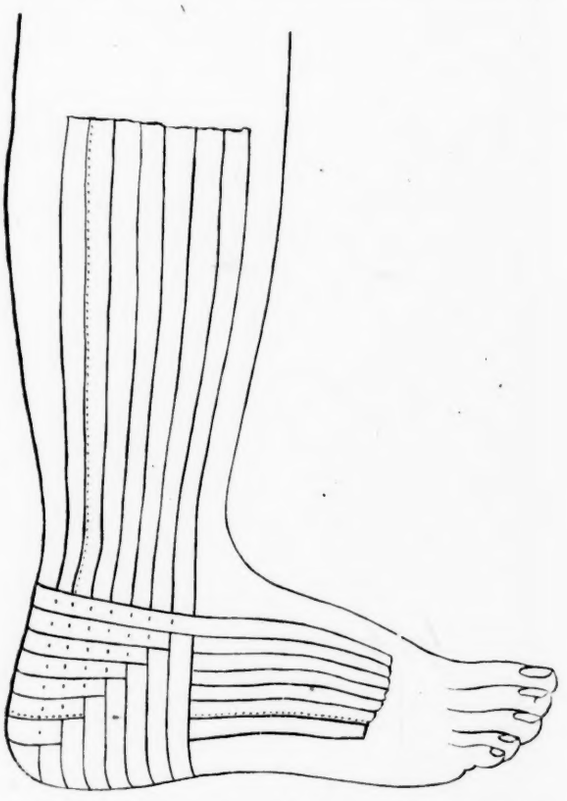


Fig. 6.—Showing arrangement of the one-half inch strips.

9. Ztsch. f. Orth. Chir., 1899.
10. Ztsch. f. Orth. Chir., 1900.
11. Ztsch. f. Orth. Chir., 1900.
12. Royal: Amer. Orth. Jour.

flat foot which had completely disabled him for work, after having worn the straps for six weeks, walked into my office with the statement, "Doctor, I feel much better and I am getting an instep again." On making new imprints and comparing them with the first ones made I was able to demonstrate that his arch was actually beginning to be re-established. Figure 8 is a reproduction of the imprints of two flat feet, the upper two imprints having been taken before the treatment was begun and the lower two after the first strapping. In the lower two imprints the arches are beginning to be re-established.

Just exactly how the adhesive straps accomplish this is a little difficult to say. They undoubtedly support the arch, as can easily be demonstrated by applying them to a case with marked flat foot. They tend to supinate and abduct the foot. They relax the muscles, thus securing rest and relieving pain. Besides being elastic, they furnish massage to the extremity with every step and consequently favor the regeneration of the muscles and ligaments.

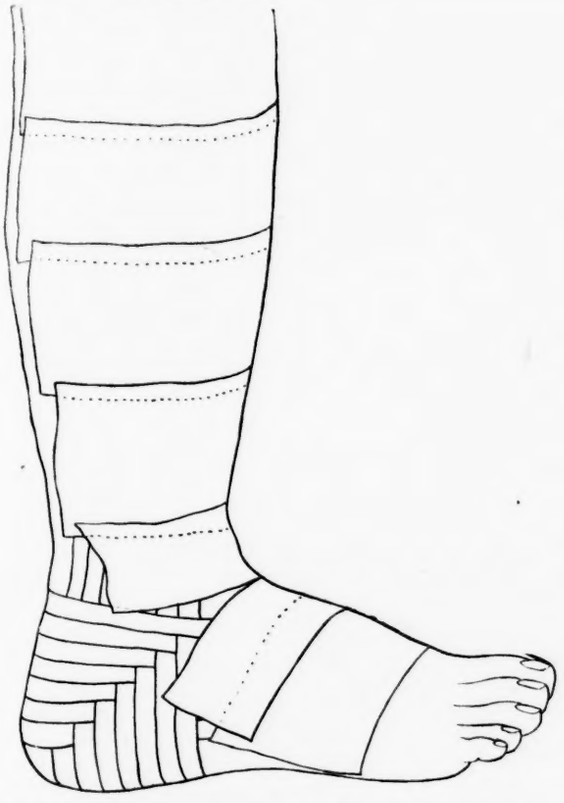


Fig. 7.—Showing arrangement of the 3¼-inch strips over the narrower strips.

As illustrating some of the points previously brought out, I wish to give a brief history of a man who placed himself under my care three years ago:

History.—He was then 33 years old, a merchant, 5 feet 10½ inches tall, weighing 190 pounds, who two years previously began to be troubled with his feet. He consulted numerous physicians and was favored with numerous diagnoses, among which may be mentioned neuralgia, rheumatism, flat foot, weak ankles and obesity. In spite of all these diagnoses, he obtained no relief, and when he came to my office it was almost impossible for him to walk. He wore steel insoles attached to braces extending within a few inches of the knees. He gave a history of having been at three different water cures for rheumatism, of having spent $1,000 at these and for medical treatment and of having lost several times that amount because of inability to properly supervise his business. I removed the braces, applied the straps, and he went home and went to work, his home physician changing the straps occasionally for the next six months. He has not lost a day or a dollar because of his flat feet since the first strapping.

This is but one of the many similar histories, any one of which would illustrate one or more of the points that I have tried to bring out. The time has come when we can no longer rest content by relieving suffering and occasionally prolonging life; we must, if we would do our full duty, prevent disease and increase the capacity for work. If we can increase the working ability of one of these patients 50, 25 or even 10 per cent. we have done much for him, his family and the community, and unless we do this we have not performed our full duty. At the present time there is much just criticism of quacks and quackery, but not until we learn to diagnose correctly and treat effectively these and similar simple cases will quacks and quackery be eliminated.

This subject presents so many points of interest that it has been impossible to even refer to all of them. I have been compelled to confine myself to the consideration of potential and acquired static flat foot, without even referring to the other though less common forms.

SUMMARY.

In conclusion, permit me to repeat a few of the things which I have endeavored to emphasize in this article:

1. Flat foot is a very much more common affection and causes much more discomfort and disability than we are inclined to believe.

Fig. 8.—Reproduction of imprints of two flat feet. Upper two imprints taken before treatment; the lower, after treatment. Showing beginning re-establishment of arch.

2. It is more apt to be caused by general muscular weakness than weakness of special muscles or parts.

3. The earliest symptoms occur at the time of, and are caused by, the changes occurring at the age of puberty, and this is the time when the proper treatment is most effective.

4. The correct diagnosis is not made as often as it should be.

5. The treatment which I have outlined is simple and effective and can be applied in the individual case in a much shorter time than it has required here to describe it.

710 Sedgwick Street.

A METHOD OF BIMANUAL ROTATION IN OCCIPITO-POSTERIOR POSITIONS OF THE VERTEX.*

WILLIAM D. PORTER, M.D.
Clinical Professor of Obstetrics in Miami Medical College; Obstetrician to Cincinnati Hospital; Gynecologist to Bethesda Hospital.
CINCINNATI.

Practically all methods which have been recommended for manual rotation in occipito-posterior positions of the vertex involve grasping the head with a hand in the vagina. To grasp such a smooth, globular, slippery mass securely is not easy. If such a grasp be secured the rotating force which can be exerted is inadequate in difficult cases. The attempt to grasp the head usually lifts it up to a higher plane of the pelvis, and this elevation of the head often results in diminished flexion; both undesirable occurrences.

In right occipito-posterior positions of the vertex, which, for convenience, we shall assume throughout this paper unless otherwise stated, the grasping of the occiput necessarily moves it away from the right side of the pelvis, against which it is uniformly found. This disturbance of position often leads to a serious complication.

With the occiput snug against the right side of the pelvis there is plenty of room for the sinciput to move to the posterior end of the left oblique diameter, the new position it must assume in rotation. If the head, previous to rotation, is moved to the left the sinciput tends to impinge on the brim. If this movement to the left is sufficiently great the impingement will be so sharp as to create a fixed point or fulcrum, on which the head by leverage will be tilted out of the pelvis, if the rotation is completed. Lifting up of the head contributes to this result. This blunder has probably originated the fallacy that lifting the head out of the pelvis is often a necessary preliminary to rotation. On the contrary, rotation is always possible in a normal pelvis, and the difficulty usually decreases with the depth of the head.

The method about to be described is one which I have used with uniform success for a number of years and in more than fifty cases. Several physicians who have seen the method used in consultation work have adopted it and are enthusiastic as to its merits. Six years ago I briefly described the method in a discussion before the Cincinnati Obstetrical Society. I have not previously presented a paper on this subject, because, until very recently, I have been unable to secure drawings which correctly illustrate the method.

The patient, having been anesthetized, should be placed on her back, across the bed, with her hips well to the edge. The legs should be supported by attendants. The obstetrician should sit directly opposite to and facing the patient.

Assuming that the cervix is fully dilated, the left hand is carried into the vagina. The entire hand is inserted if the head is high, and the half hand if the head is low. The palmar surface of the fingers is applied to the right side of the occiput. In order to do this, sharp outward rotation of the hand and forearm is necessary, and this rotation should precede the introduction of the hand. The ulnar edge of the hand is toward the pubes and the thumb points downward and to the patient's right (Fig. 1).

Several advantages are secured by this maneuver. It is easily accomplished without disturbing the position of the head, as there is always plenty of room in the left side of the pelvis. There is no danger of pushing the head up nor of diminishing flexion. Another advantage is that by this preliminary twisting of the hand and forearm a great increase of power is gained. As rotation takes place the muscles are untwisting, and the available power is several times greater than if the opposite process were taking place.

Coincidentally with the placing of the left hand the tips of the fingers of the right hand are pressed firmly on the abdominal wall above the pubes until they come in contact with the left frontal region of the child's head. This position is readily recognized by the combined manipulation. If the head is high the external hand may be several inches above the pubes. With the head on the pelvic floor the fingers must be pressed close behind the pubes. When the external hand is correctly placed the head is held firmly in the grasp of the two hands. The correct position of the hands is shown in Figure 1.

The head is rotated by the combined action of the two hands. At the beginning of rotation the fingers of the internal hand make pressure directly against the right side of the occiput and crowd it firmly against the right side of the pelvis. In addition to assisting in rotation this pressure accomplishes two important results. First, it prevents the head from moving to the left, and thus insures plenty of room in the left side of the pelvis for the sinciput which is to be rotated to that part. This is particularly important when the head is high, as we have shown.

The second result is of more importance, but it is difficult to explain. Imagine a straight line about two inches in length drawn transversely across the foramen magnum, its middle point coinciding with the center of the foramen. Such a line will be parallel with the biparietal diameter. Draw a straight line from each end of this line to the corresponding end of the biparietal diameter. These connecting lines approximately touch the skull throughout their length, and the figure so constructed represents a wedge-shaped section of the occiput. One side of this wedge lies against the right side of the pelvis. Against the other side of the wedge the fingers of the internal hand press. This pressure tends to move the occiput toward the large end of the wedge or, in other words, to increase the flexion of the head. If flexion is already well marked, the pressure of the hand will simply maintain this condition. If flexion is defective, the slippery occiput is promptly moved by the pressure toward the base of the wedge. This movement, increasing flexion, is directly proportional to the amount of force used. In case considerable force is needed the fingers necessarily tend to become flexed and, therefore, transmit most of the pressure from the tips, enabling the operator to make a direct pull on the occiput.

It must not be inferred, however, that a distinct effort is made to increase flexion before rotation is attempted. The mechanism by which flexion is produced is incidental to the method of rotation. With the head held between the hands the attempt is made to rotate. If the rotation requires slight force, very little change in flexion occurs. If considerable force is necessary the pressure of the internal hand necessarily crowds the occiput downward. The amount of flexion is, therefore, almost automatically regulated to meet the requirements of the particular case.

* Read in the Section on Obstetrics and Diseases of Women of the American Medical Association, at the Fifty-eighth Annual Session, June, 1907.

Simultaneously with the pressure of the internal hand the external hand makes pressure almost directly downward on the left fronto-temporal region of the head. With the backward movement of the sinciput the pressure is directed more to the mother's left, in order to be about at right angles to the side of the head. Under anesthesia the tissues of the abdominal wall readily permit of this excursion of the hand.

As before stated, there is usually plenty of room in the left side of the pelvis, and the sinciput encounters little resistance in moving to its new position. Therefore, the pressure on the anterior pole is very effective.

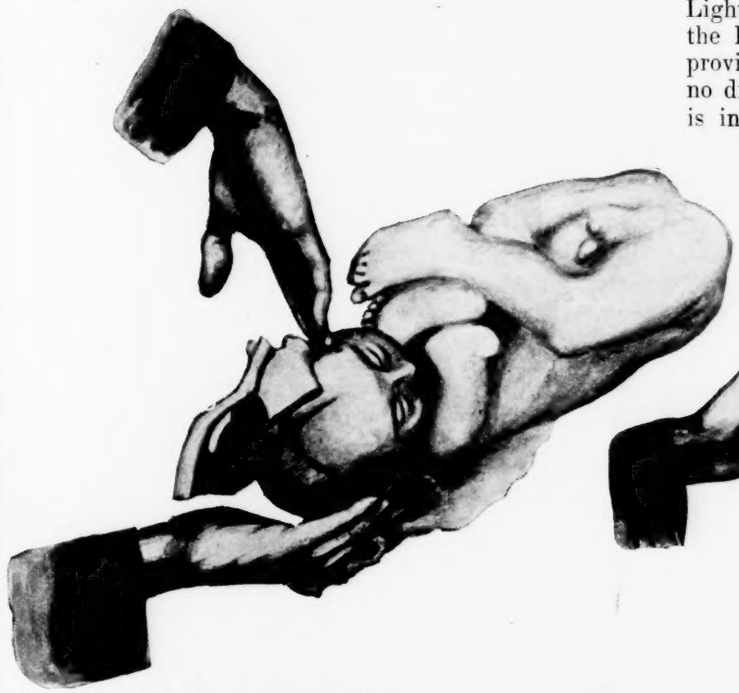


Fig. 1.—Showing right occipito-posterior position of vertex and the position of hands preliminary to rotation.

Fig. 2.—The head has been rotated through ninety degrees and is in the right occipito-anterior position. The hands are shown in their position at the end of rotation.

It is evident that with the internal hand capable of considerable rotary force, and with the external hand utilizing an effective leverage, a tremendous rotating power could be applied if necessary. Rotation is usually surprisingly easy. Even in the few cases of slight impaction which I have encountered, only moderately strong effort has been necessary. There can be no question that the method is well adapted for unlocking an impaction.

Figure 2 shows the position of the hands at the end of rotation. The position of each hand remains unchanged in its relation to the head during the process of rotation.

The head, if released after rotation, would usually be returned to its original position by the untwisting of the cervical muscles. The only reliable means of maintaining the new position is by the application of forceps, and this is advisable even though the labor should be terminated wholly or in part by the natural forces. Light pressure maintained by the external hand secures the head against turning back to the faulty position, provided this pressure is properly directed. There is no difficulty in doing this so long as the internal hand is in place. After its withdrawal, movement on part of the patient or a strong uterine contraction might easily impair the accuracy of the external pressure and release the head.

Both hands being in position after rotation is complete, the nurse or an assistant should superimpose a hand directly over the obstetrician's external hand and carefully make pressure as directed. When satisfied that this pressure is properly directed and gauged, the operator may remove his hand from the abdominal wall. The internal hand is then removed and forceps applied, as shown in Figure 3.

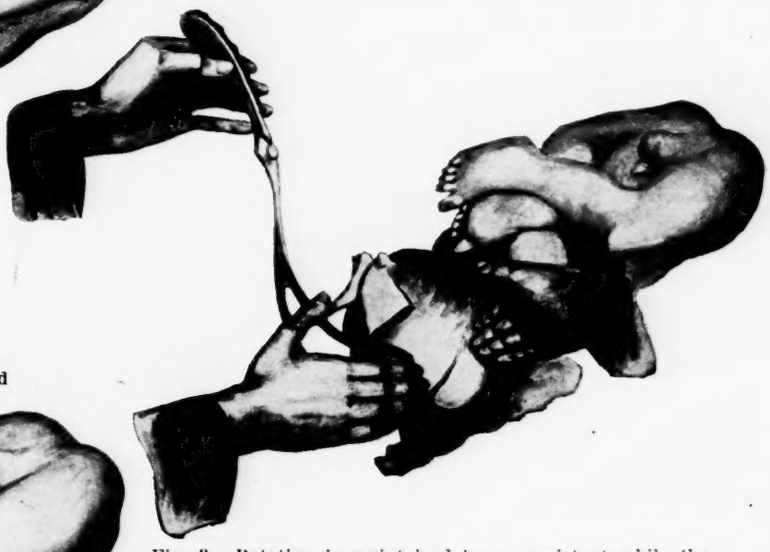


Fig. 3.—Rotation is maintained by an assistant while the obstetrician is applying the forceps.

This interval between the removal of the hands and the application of forceps is the only time when the head is not entirely under the control of the obstetrician. It is well for him to make this interval as brief as possible, and even then there will sometimes be trouble. From faulty pressure the nurse may allow the head to slip back, and if this happens the process must be repeated from the beginning. If the head is well down in the pelvis, there is little danger of this accident.

If this complication should occur, it is well, in the second attempt, to carry the rotation only a little beyond the transverse position, as the head has but slight tendency to swing back and a good application of forceps can usually be made.

In left occipito-posterior positions, the method of rotation is the same, but the right hand is used internally and the left externally. The head is rotated into the left occipito-anterior position. There is little difficulty

in keeping the head in this position while applying forceps. The right hand can be kept in place along the left side of the head until the first blade is applied, and this blade helps to keep the head from turning until the second blade is applied.

DISCUSSION.

DR. W. P. MANTON, Detroit, considered the manipulation suggested a very interesting one and, judging from the report, a successful one. He has tried almost all of the methods advocated for changing the occipito-posterior position, but in his hands the majority have been failures. One reason for this is the fact that in private practice the obstetrician is called in rather late to see these cases. The head, as a rule, is too far down in the pelvic cavity. Very often the membranes have ruptured and there is really very little opportunity to do anything except to let Nature proceed, rotate anteriorly, or apply the forceps. In Dr. Manton's experience this position occurs very largely in elderly primiparæ, very rarely in younger women. Of course, he said, in women of 30 and over the tissues become stiffer, more fibrous, and almost any manipulation becomes more difficult. In these cases, where the head lies posteriorly and is so delivered, the perineum is almost invariably lacerated. Dr. Porter's method would, he thought, assist very materially in delivering these women; although generally cases are seen so late that little can be done.

DR. WILLIAM D. PORTER, Cincinnati, said that unfortunately a large proportion of obstetricians still follow the plan of delivering with forceps, without any attempt at rotation. This causes an unnecessarily large fetal mortality and often severe damage to the soft parts of the mother. He thinks that he has seen cases of impaction due to forcible efforts at delivery with the occiput posterior. If the blades are applied with reference to the pelvis, the head may be unintentionally rotated in the wrong direction until the occiput is exactly posterior. Traction with the head in this position may readily cause impaction. Impaction by the natural forces must be exceedingly rare in this position. Should it occur, rotation is the logical method of unlocking the impaction. He believes that rotation is always feasible in a normal pelvis, and the lower the head the easier the rotation.

WHOOPING COUGH.

FIVE HUNDRED AND FIFTY CASES TREATED BY THE ABDOMINAL BELT.*

THERON WENDELL KILMER, M.D.
NEW YORK CITY.

The use of the abdominal belt to control the vomiting of pertussis has long passed the experimental stage. In my own series of cases, now numbering 43, in which the belt has been used, the results have been surprisingly good. It occurred to me that the results obtained in my own cases possibly were not shared by the profession in general. I, therefore, sent the following circular letter to many of the leading pediatrists of the United States, and it is to a study of the results obtained in so doing that I ask your attention for a few moments.

Dear Doctor:—Being anxious to obtain a few statistics of cases of whooping cough which have been treated by means of the elastic abdominal belt (or any modification of it), will you do me the favor of replying to the following questions?

Sincerely yours

THERON W. KILMER.

1. Number of cases treated by belt....
2. Result (especially as to vomiting): Improved.... Unimproved....
3. Complications, if any: Number and variety....
4. Age of patients: Infants...., Children....

Remarks....

Some 54 letters were sent to pediatrists living in all parts of the United States. From the 54 letters I received 45 replies. Most of these replies were very interesting as to the almost universal benefit noticed regarding the cessation of vomiting. As this is the chief point which has ever been claimed for the belt treatment, it is extremely pleasing to have so great an amount of testimony to supplement my own. Fifteen of the pediatrists had either never used the belt, or had seen no cases of pertussis on which to try it. One reported 4 cases in which he had used the belt with no success whatever. This was undoubtedly true, but they were, in my opinion, either exceptionally obstinate cases or some fault in technic was present, comparing them with the 484 cases which were benefited. This series of 4 cases in which no improvement was seen is the only series in the entire number which does not show a marked improvement in cases treated. Some observers reported that the mothers interfered with the belt treatment, but the results thus obtained are nevertheless tabulated. Again, other observers reported great benefit by use of the belt, but no records—these cases are, of course, not included in my report. There have been patients in my own series of cases which have been systematically weighed at definite intervals, and show a gain of weight during the entire disease, due undoubtedly to the beneficial action of the belt on the prevention of vomiting. One of my patients gained 6½ pounds in the course of the disease. I am sure that, had each of these 550 patients been weighed during their attacks, many would have been found that showed a gain in weight. This is, of course, usually the contrary in the average case of pertussis not treated by the belt method.

Many in the entire series of cases were given some form of medication supplementing the belt, and one might skeptically remark that it was owing to the medication that the great improvement was due while wearing the belt! Although medication is an important adjunct to the belt treatment of whooping cough, we see cases that show great rise in the number of paroxysms of vomiting immediately on removal of the belt, and a corresponding decrease in these vomiting spells on the reapplication of the belt, although the child is taking the same form of medication continuously. In my own series of 43 cases, which were nearly all treated by means of the belt from the onset of the spasmodic stage, complications were rare, being seen in but 3 cases out of the 43.

I note, in the total series of 550 cases, that complications occurred, observed by various pediatrists, in 125 cases; this would rather at first glance upset my theory that the belt prevents complications to a certain extent. But on questioning most of the observers who reported complications I found that the majority of these complications existed before the application of the belt.

The report of one observer of the large number of hernias present (both umbilical and inguinal)—while no mention is made of a single case of hernia by any other observer—is certainly interesting. Whether these hernias occurred in his cases only, or whether they occurred in many cases observed by other men and were not recognized, is a question which can only be solved by a more thorough system of examination and record. Bronchopneumonia and bronchitis appear to be the most frequent complications. In a few cases I tried the experiment of noting, in a given child with a cough, what effect during the act of coughing digital pressure would have when such pressure was applied to the umbilical

* Read in the Section on Diseases of Children of the American Medical Association, at the Fifty-eighth Annual Session, held at Atlantic City, June, 1907.

region. In some cases the cough would immediately cease when pressure was applied. In others no amount of pressure would produce any diminution of the cough. In further studying these same cases, I found that the coughs that stopped during digital pressure applied to the umbilical region were usually in the children who subsequently developed whooping cough, while the coughs which were not controlled by pressure were usually due to some other pathologic condition, such as bronchitis or adenoids. These observations have been made in far too limited a number of cases to enable one to judge whether or not this sign will be of any value in establishing an early diagnosis of pertussis while in the catarrhal stage, but they are nevertheless interesting.

TABLE SHOWING RESULTS OF TREATMENT WITH ABDOMINAL BELT.

Series.	Improved.	Not Improved.	Infants.	Children.	Complications.	Variety of Complications.
1	68	29	34	63	38	Hernia: umbil. 18, inguin. 15, prol. rectum 3, convulsions 2.
2	1	..	..	1	..	
3	12	..	..	12	..	
4	30	..	15	15	..	
5	2	..	1	1	..	
6	4	..	..	4	1	Bronchopneumonia.
7	15	8	11	12	3	2 bronchopneumonia, 1 hemorrhagic conjunctiva.
8	2	1	1	2	1	Bronchopneumonia.
9	2	..	1	1	..	
10	3	2	..	5	..	
11	2	..	1	1	..	
12	..	4	1	3	1	Bronchitis.
13	1	..	..	1	..	
14	6	..	..	6	..	
15	6	..	4	2	2	Bronchitis.
16	7	5	..	12	4	1 bronchopneumonia, 3 otitis media.
17	4	6	2	8	5	2 bronchopneumonia, 2 measles, 1 epistaxis.
18	4	2	1	5	..	
19	25	8	20	13	..	
20	12	..	6	6	2	Bronchitis.
21	228	..	67	161	63	45 bronchitis, 6 bronchopneum., 3 subconjunct. hemorrh., 8 gastro-enteritis, 1 endocarditis.
22	3	..	1	2	1	Bronchitis.
23	1	..	1	..	1	Bronchopneumonia.
24	38	5	23	20	3	1 bronchopneumonia, 2 bronchitis.
25	2	..	..	2	..	
26	1	..	..	1	..	
27	1	..	..	1	..	
28	4	2	1	5	..	
	484	72	191	365	125	Total.

The first belt, as many of you know, was composed of a long strip of silk elastic placed over a stockinette band; this, while efficacious, was nevertheless warm to the child and expensive to the parents. The new belt is made of linen with a strip of silk elastic webbing two inches wide inserted on either side. This is sufficient to give the belt elasticity, yet does not add materially to its weight. The belt laces in the back and, by means of the lacings, any degree of constriction may be maintained; it is worn over the undershirt or band. The width should approximately be as follows: For infants, 4 to 5 inches wide; for children, 5 to 8 inches wide.

The length of the belt should be such that when complete it should measure three inches less than the circumference of the abdomen at the navel. The degree of constriction should be determined in each individual case; usually a slight degree of constriction is sufficient to produce a moderation of the cough and a complete cessation of vomiting. If, after having applied the belt, the symptoms do not abate, tighten it slightly.

A sense of comfort is generally expressed by children who are old enough to make themselves understood. These belts can be made by any instrument maker at a few hours' notice; the usual mode of procuring them in any individual case is to send the measure of the circumference of the child's abdomen (at the navel) to the instrument maker, also stating the age of the child, and in twenty-four hours' time a belt is ready for application. The belt is best applied by the attending physician, and the parents and nurse should be instructed in its use.

The cost of the belt is nominal, from $1.50 to $3.00 being charged for its making. In dispensary cases and when parents can not afford the belt I have used an ordinary muslin binder and, although this is not as elegant as the belt, the results are very satisfactory.

It is a mistake to suppose that all that is necessary to obtain a beneficial result in any given case of whooping cough is to procure some sort of a constricting ab-

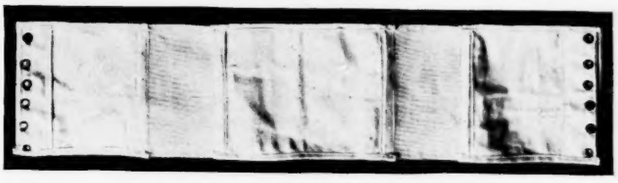


Fig. 1.—The whooping-cough belt.

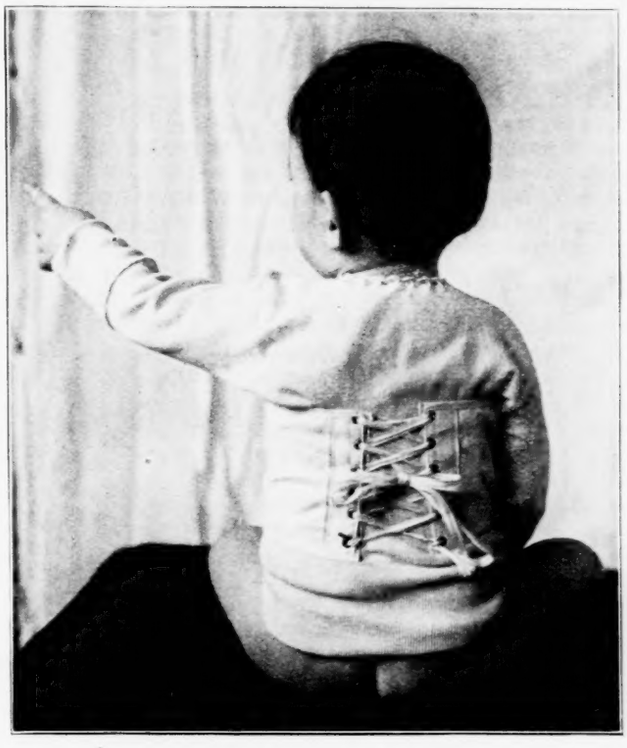


Fig. 2.—Rear view of the belt applied.

dominal binder and give it to the mother or nurse to apply. The abdomen should be carefully measured and the proper constriction obtained. The degree of constriction should at first be very slight; if the vomiting does not appreciably diminish, tighten the belt slightly. The amount of constriction will vary with different cases and with the same case on different days. The belt should be slightly loosened at meals. It may be taken off at night or at intervals during the day when the paroxysms are not severe. I was much amused to find in looking up the literature on pertussis that in the year 300 A. D. it was said "a tight cord tied around the middle of the body will help violent coughs," proving that there is nothing new under the sun. The belt

is a new application of this old principle which was known hundreds of years ago.

The beneficial results obtained by other men and myself in this comparatively large number of cases, showing that 87 per cent. of patients wearing the belt are helped by its use, demonstrate positively and conclusively that the belt method of treating whooping cough is of therapeutic value.

DISCUSSION.

DR. C. DOUGLAS, Detroit, said that when Dr. Kilmer's article appeared, he tried the treatment experimentally and found mothers much impressed with the beneficial results. Although some mothers would take the belt off, Dr. Douglas was much pleased to find that they all came back to it; not only that, but some of the children asked the mother to have the belt put back, saying the cough did not hurt so much with the belt on.

DR. G. H. CATTERMOLE, Boulder, Colo., has not tried this belt, but for some time he has directed the mother to use pressure over the child's back and counter pressure over the abdomen. It does lessen the amount of vomiting. Dr. Cattermole thought the belt would be an improvement over his method.

DR. R. B. GILBERT, Louisville, Ky., has not tried the belt, simply because he was afraid of inducing hernia. The wearing of the ordinary belt that the nurse puts on the newborn infant often causes hernia if it is bound too tightly. This is apt to occur especially in the male infant. Therefore Dr. Gilbert still feels apprehensive about using the belt.

DR. C. G. KERLEY, New York City, endorsed the value of the belt as a therapeutic measure, although it is not a curative one. That is, it does not cure whooping cough, but its use makes it easier for the child to bear the disease and he goes through the attack much more satisfactorily as regards his general condition, because it often enables him to keep down his food. He commenced using the belt very much of a doubter, but has tried to give it a fair trial, and by noting the good results in preventing vomiting he came to believe in it. It showed conclusively that in a majority of cases the vomiting was relieved to a considerable degree. He thinks that it ought to be used more generally. He has used it for the last year in all cases of whooping cough, with satisfactory results. It is, he said, particularly beneficial in the case of little babies that can not take drugs. When these children vomit they lose their milk, and this is a serious matter to them. He has never seen a case of hernia follow its use.

DR. T. W. KILMER, New York City, stated that large children appreciate the belt; he has seen children cry for it. Hernia sometimes occurs during whooping cough, but, he said, it occurs more often in children who do not wear the supporting belt than in children who do. The belt is especially useful in young infants, and the pressure does give relief.

A COMPARATIVE STUDY OF RENAL AND BILIARY DISEASE IN WHICH CALCULI FIGURE PROMINENTLY.

A. M. POND, M.D.
DUBUQUE, IOWA.

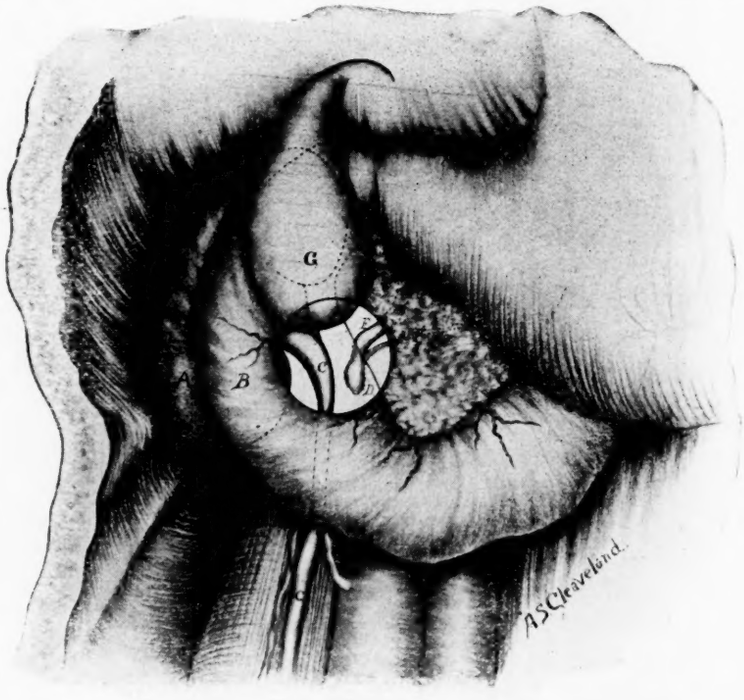
There is a striking similarity between renal disease in which calculi figure prominently and in diseases of the liver or biliary tract in which gallstones are formed. The analogy goes beyond the fact that a hard and sometimes irregular mass has been formed by reason of perverted function in a soft canal or pouch, and that attempts at getting rid of this obstacle are attended by varying degrees of pain and followed by more or less serious results.

The comparisons can be carried to the formation of these bodies, the symptoms produced by them and the pathologic conditions resulting therefrom. This fact makes a diagnosis sometimes exceedingly difficult when the right kidney is at fault, since the relational anatomy is so intimate and the nerve supply of the viscera involved is so complex and extensive.

CONDITIONS FAVORING CALCULUS FORMATION.

There seems to be an imperative law of our physical being which demands that all currents of secretion or excretion be unobstructed, and so long as these currents are not interfered with the functions are performed without discomfort and without any pathologic processes resulting, but the moment any obstruction occurs trouble immediately arises.

The source of the disturbance may be due to a normal



Relation of ampulla of Vater to the upper portion of ureter. A, kidney; B, duodenum; CC, ureter; D, ampulla of Vater; E, common duct; F, pancreatic duct; G, gall bladder.

constriction as in the case of the ureter, the caliber of which is nearly uniform throughout its entire length. It is slightly constricted, however, at about one and one-fourth inches below the renal pelvis; this would be slightly below the site where the descending duodenum crosses the anterior portion of the kidney. On the other hand, a perfectly normal right kidney possessed of the normal amount of mobility (three-fourths to one and one-half inches) could, if the direction of the motion be forward, produce a constriction if not an obstruction of the cystic, and perhaps the common duct, as will be seen later in considering relational anatomy.

Where the lumen of these canals are lessened there is first a hyperemia, then an extravasation of blood or serum that combines with the mineral matter of the secreted fluid and a nidus is formed that eventually becomes a calculus. In the case of the ureter, where the

constriction is normal, this congestion is produced in the opposite way, viz., by dilatation of the normal constriction. This may occur during the passage of an unusual amount of urine heavily laden with crystaline or amorphous material, or perhaps from a small calculus which has descended from the renal pelvis and become the source of the nidus. In either case extravasated albuminous substances from the blood, resulting from the hyperemia induced by the tissue being put on a stretch, combines with the mineral salts to form the calculus.

Renal calculi are produced by some damming back of the flow of urine into the pelvis of the kidney and by tension of the pouch, producing hyperemia and extravasation of the albuminous portion of the blood, the latter combining with the mineral salts as above described.

There is always an albuminous substance in these formations. This can readily be demonstrated by dissolving the stones by chemical action; after the inorganic substances have been wholly dissolved there remains an organic pulpy mass. The unorganized salts of kidney and ureteral stone are oxalic, phosphatic and uric. This albuminous material is the result of the hyperemia and is the element in the formation of calculi that promotes the cohesion.

Thus we find that a disturbance of the vasomotor supply of a part must precede the extravasation of the organic materials and that the presence of the organic substances seems to attract and cohere with the inorganic elements of the current.

This hyperemia is caused by the same agents that produce congestion elsewhere and may briefly be classified as thermic, traumatic or specific.

1. Variations of temperature, either heat or cold, local or general, have a potent influence on the vasomotor mechanism and produce the disturbances of a part possessing the lowest resistance.

2. Traumatism of any degree necessitates repair and requires the well-known phenomena of increased circulation to the damaged area.

3. Specific organisms provoke disturbance of the circulation by one or more of the properties ascribed to the blood in its attitude toward bacteria, viz., agglutinating, bactericidal, bacteriolytic or phagocytic.

In calculi of the biliary tract the same general laws of formation pertain, but there exists a difference of chemical composition. Calculi of the biliary tract consist chiefly of bilirubin, usually combined with calcium, and cholesterin; the presence of a nidus in the biliary tract is determined by its size; if small, it no doubt passes out of the gall bladder after the subsidence of the acute inflammation and may be expelled into the duodenum; if its size prohibits this, it will remain a constant menace to the membrane tolerating it and constantly calling forth an extravasation of blood which again unites with the elements of the stagnated bile and forms layer on layer about the original nidus; thus is explained the growth of these bodies and the peculiar stratified appearance they present when sectioned.

In the cases presenting the numerous small calculi the same process as outlined probably obtains, and instead of forming layers on the original nidus the cohesion takes place anew each time, forming a small hard calculus.

No doubt the salt or combination of salts determine the multiplicity of stones also, as, for example, the large number of small stones usually show a composition of bilirubin with calcium; their color ranges from a deep yellow to a decided brownish black, they are irregular in size and the outer surface is hard with a soft center.

The stones in which cholesterin is the whole or principal constituent are large, very hard, showing layer on layer when mixed with some calcium salts, and are either white or light in color. This substance is no doubt derived from the diseased mucosa of the gall bladder, as first suggested by Budd in 1845, supported by Bristowe in 1889, and indorsed and elaborated by Naunyn in 1892. Cholesterin calculi are very slowly soluble in normal bile; the other substances not at all.

The pathologic cause is identical in each system, the difference is only in composition.

RELATIONAL ANATOMY.

In the male the normal position of the kidney extends from the twelfth dorsal vertebra to the upper border of the fourth lumbar vertebra; in the female the position is about one-half inch lower. The right kidney is wholly covered by the liver laterally, the posterior parietal peritoneum only being interposed. Anterior to its middle position, on a plane with the pelvis of the right kidney, crosses the descending portion of the duodenum; one and one-fourth inches from the site where the duodenum crosses the pelvis is the ampulla of Vater, the common opening of the intestinal outlet of the duct of Wirsung and the common duct. Its lower margin is in contact for a variable extent with the right flexure of the colon.

Remembering now the normal constrictions in the ureter, viz., (a) one and one-half inches from the renal pelvis as the ureter flexes forward over the anterior portion of the psoas muscles, (b) at the level of the pelvic brim where flexion is downward crossing the bifurcation of the common iliac artery, and (c) as the ureter approaches the vesicle orifice, it becomes apparent that when the calculus is caught at the upper constriction or where the ureter flexes forward to cross the psoas muscle it is on or near a level with the opening of the ampulla of Vater.

The flexure of the ureter over the psoas muscle, the opening of the duct of Wirsung and the common bile duct into the ampulla of Vater, and the fundus of the gall bladder, are within an area of one and one-fourth inches diameter, or about the size of a silver dollar (see illustration. The duct of Wirsung comes from the left and is joined from above by the common duct at the level of the upper portion of the third vertebra, one and one-fourth to two inches to the right of the vertebral column.

The pelvis of the kidney is opposite the lower portion of the first lumbar about one-half inch to the right; directly in front of this point lies the surface of the liver as it dips forward, and on its under surface extending from behind forward on the same plane is the gall bladder lying in an obliquely transverse position, the fundus being the lowest point and in close proximity to the external abdominal wall as it emerges from the hepatic notch.

A right kidney normally movable would, if the displacement be sufficient and the direction of motion be forward, encroach on the pyloric end of the stomach and duodenum in its descending portion and compress the biliary duct which descends behind the pylorus and duodenum. Into the descending portion of the duodenum, which is about four inches long, the pancreatic and biliary secretions are emptied, usually through a common opening, viz., the ampulla of Vater.

URETERS AND BILIARY DUCTS COMPARED.

The gall bladder is a storage cyst for the product of the liver not immediately required. During the day or working hours of an individual when food is taken at regular intervals there is no accumulation of bile in the gall bladder, the product of the liver being demanded for immediate use in digestion, but at night the functionating liver stores its secretion in the gall bladder for emergency demands. One has only to observe carefully the amount of bile discharged through a tube during the convalescence of a patient where the gall bladder has been drained to prove this. During the first twenty-four or thirty-six hours after operation, and during the period when food is denied, the discharge of bile is greater during the daytime, but as food is permitted the discharge of bile is lessened during the day and increased at night.

During the day when the bile is discharged directly into the intestine there is an interesting periodicity noticed; the bile flows down the ducts, but is not immediately permitted to enter the intestine drop by drop as excreted, but is held in check at the ampulla of Vater by a valve-like action of the "papilla major:" here the bile current is joined by the pancreatic discharge, until a sufficient amount accumulates to exert the pressure required to permit its escape. This amount varies at different times and in different individuals from 1 c.c. to 4 c.c. (15 m. to 1 dram).

The discharge from the gall bladder is regulated by two elements of dynamics, first, the pressure of the cystic muscularis, and, second, the valve-like arrangement of the cystic duct, one compensating the other and permitting the bile to escape in proper amounts, the contractions of the gall bladder occurring synchronously with the contractions of the stomach during digestion.

A similar periodicity of discharge may be noted in regard to the ureters. Through a cystoscope the discharge of urine may be seen to occur at frequent intervals and of a relatively considerable amount at a time, instead of a continuous dribble, the ureter orifices closing tightly after the discharge and again opening suddenly, emitting a fine steam, sometimes with force sufficient to cause a perceptible swirl of the fluid contained in the bladder.

FACTORS DETERMINING THE LOCATION OF CALCULI.

Urinary calculi may form in the pelvis of the kidney and assume such proportions that it is impossible for them to escape and, curiously enough, may cause no symptoms that would create any suspicion of their presence. A small stone just large enough to be denied entrance into the ureter will cause more definite and distressing symptoms than one much larger. The larger stone will not be shifted in its position so frequently and would not encroach on the pelvic ureteral opening.

After a urinary calculus has passed into the ureter there are three distinct points where its transit may be interrupted. These points have already been mentioned at length above:

1. At the psoas flexure, one and one-fourth to one and one-half inches below the kidney pelvis.

2. At the iliac flexure, on the level of pelvic brim.

3. At the vesical flexure near the union with bladder.

Of these regions the upper flexure is most frequently the site of a stone; 40.7 per cent. of the stones found in the ureter are found at this site. At the second flexure stones are found in 25 per cent. The lower flexure gives a percentage of 30.5 per cent., coming next in frequency to the first flexure. Other portions of the ureter give 3.8 per cent. of the stones.

The following percentages in the location of calculi in the biliary tract are compiled from reports of the work done by men who see the largest number of cases and are only approximate. In more than one-half (54-58) per cent. of all cases of biliary calculi the stones are found in the gall bladder; stones in this locality are often complicated by stone in the cystic duct; this complication is noted in 12 per cent. of the cases, while stone in the common duct is associated with gall bladder stones in 10 per cent. Stone is found in the cystic duct alone in 6 per cent., while in the common duct alone it occurs a trifle more frequently, viz., 6.5 per cent.

Very rarely stones are found in the gall bladder, hepatic, cystic and common ducts at the same time. Stones in the hepatic duct are seldom found alone or in association with stones in the gall bladder; however, they occasionally accompany stone in the common duct. The predominance of the gall bladder as a site of these bodies is easily explained by the anatomy of this cyst, the opening occurs in a constricted portion of the sac and its upper extremity. The location of the stone in the cystic duct is usually near the gall bladder. In the case of stone in the common duct it is interesting and instructive to note their location; in 14 per cent. of the cases they are located just below the junction of the cystic with hepatic duct at the beginning of the common duct, in 12 per cent. stone is found about one and one-half inches below the bifurcation, and in 10 per cent. stone is found in the retroduodenal portion of the common duct, and in 57 per cent of all common duct stones their location was found to be in the ampulla of Vater, the narrowed portion of the papilla of the ampulla proving the obstruction that prevented their escape into the duodenum.

ANALYSIS OF SYMPTOMS.

The provoking cause of symptoms in either the biliary or renal tract consequent on the presence of calculi may for convenience be classed under three heads: 1, Obstructive; 2, infective; 3, traumatic.

1. The symptoms occasioned by obstruction are due to the interrupted normal flow of the urine or the bile, as the case may be; in the case of stone in the kidney, obstruction is more commonly caused by a small calculus completely occluding the ureteral opening; in the gall bladder by a stone plugging in the neck of the gall bladder or becoming firmly encysted either in the cystic or common duct. In either locality there is a damming back of the secretion formed and a consequent stagnation.

2. Infection follows stagnation as a natural sequence and at first is local but rapidly invades the proximal and distal portions of the system involved and is made manifest according to the supply of lymphatic circulation; where lymphatic circulation is ample a prompt general disturbance is apparent, chills may occur, high temperature follow with pain and prostration. In the absence of lymphatic nodes, however, the physical symptoms may remain insignificant. This is particularly true of the gall bladder, which is very tensile and permits of absorption to equalize the supply, and since there are no lymphatic nodes in this site the entire process may be without any rise in temperature.

3. Traumatism is caused by the pressure of the calculus and is increased by the swollen and thickened sur-

rounding tissue which is due to the inflammation of the part.

In a recent paper Bovée[1] quotes the combined series of Cunningham and Morris relative to the site of the stone in each kidney as follows: Right kidney 119 cases, left kidney 98 cases, and both kidneys 11 cases. (Note the frequency of right kidney stone).

As a rule a diagnosis between kidney stone and gallstone will not be difficult. The history of hematuria on exertion, a sharp lancinating in the loin gravitating to the groin or bladder with abuminous urine, are typical symptoms of renal calculi, but there may occur a wide variation in these symptoms, and it is then that the differentiation is difficult.

A stone may exist a long time in a kidney without hematuria until some blow or strain followed by a sharp pain provokes it. When we consider the intimate relational anatomy of the renal and biliary system the surprise is not that errors occur in diagnosis but that they are not more frequent. Chills and subsequent rise of temperature are frequent in each condition, as is also vomiting and other disturbances of the gastrointestinal tract.

In calculus of the kidney or ureter the nausea and vomiting follow closely after or during the intense colic and is explained by the intimate relation existing between the pneumogastric nerve and the renal plexus. The same stomach disturbance is to be noted in gallstone disease and occurs in a similar relation to the colicky seizures.

When the pain of renal or ureteral colic continues down the course of ureter into the groin or bladder the condition is not perplexing, but not infrequently the pain of the colic centers near the umbilicus or even higher, approximating the region of the gall bladder, then it is decidedly confusing.

Even the presence of a tumor palpable in the right upper abdominal quadrant is not positive indication of an enlarged gall bladder or a hydronephrotic right kidney, as its presence may be found in either.

Radiography was at first thought to be the element of diagnosis that would invariably clear the situation. Leonard[2] expresses himself in no doubtful terms of its value and, judging from his report of cases, his positive opinions are well founded. Hulst[3] and Mosely[4] are equally as enthusiastic but do not present such records of success. MacIntyre,[5] Abbe,[6] Davidson and Morton[7] have repeatedly succeeded in demonstrating and locating calculi in the kidney and confirmed their work by operation. On the other hand, Albarran, Guvon, Tuffer and Alexis Thompson express themselves frankly as to its uncertainty.

Osgood[8] observes that in cases which show a shadow a calculus can unquestionably be demonstrated, but that all cases of calculus do not show a shadow, hence the mere absence of shadow in suspicious cases is not conclusive proof that calculi do not exist.

It is my experience that the more uric acid or urates entering the composition of calculi the less likely are they to give a satisfactory shadow.

Morris[9] did some original work along this line by demonstrating the shadow value of the different stones outside of the body; oxalate of lime gave a shadow deeper than bone from a three-minute exposure, which became very faint on exposure for eighteen minutes; phosphate of lime gave a dark shadow; uric acid stone a very faint shadow, and the biliary stones also gave a faint shadow.

The cystoscope is valuable in determining whether both ureters are emitting the fine jets of urine. Catheterization of the ureters or the passage of Kelly's wax-tipped bougies will usually detect a stone in the ureter or kidney pelvis, but such ureteral exploration should not be attempted, however, until after the urine and bladder are known to be sterile; otherwise extended infection would surely follow. The segregator determines only the activity of each kidney or the patency of each ureter and demonstrates the presence or absence of blood in either.

Carl Beck[10] states that biliary stones of pure cholesterin show a faint shadow and comments on the difficulty of securing satisfactory results in gall-stones by reason of the density of the liver, which acts as a curtain. Respiratory movements and the flushing of gallstones with bile also served as elements unsatisfactory to the *x*-ray diagnosis of gallstones.

To recapitulate briefly we observe that:

1. Kidney stone usually is found in the pelvis of the kidney and the frequency of the right kidney is 119 to 98 in the left.

2. Ureteral stone is found in 40.7 per cent., or in nearly one-half, of the cases at the upper flexure of psoas flexure.

3. More than half of the gallstones found in the common duct are located in the ampulla of Vater.

4. Both of these regions are connected with the pneumogastric distribution through the renal plexus, and this explains the nausea and vomiting during the acute seizures.

5. The pelvis of the kidney, the usual site of kidney stone; the psoas flexure of the ureter, the location of 40.7 per cent. of all ureteral stone; the fundus of the gall bladder, the site of gallstone in more than half of all cases; the descending common duct, the distal portion of the duct of Wirsung; the ampulla of Vater, which is in the location of 57 per cent. of all common-duct stone; and the descending portion of duodenum, are all contained in space covered by a silver dollar, between the end of the ninth rib and the umbilicus (see illustration).

6. The pain of a kidney or ureteral stone does not always radiate to the groin or bladder, but is sometimes more evident about or above the umbilicus.

It is obvious then that disturbance of any of these structures may produce symptoms of pathology in the adjacent structures.

1. Am. Jour. Med. Sciences, November, 1906.
2. Ann of Surg., xxxiii, xxv, February, 1900, and April, 1907.
3. Am. Med., Dec. 24, 1904.
4. N. Y. Med. Jour., March 7, 1903.
5. Glasgow Lancet, July, 1896.
6. Ann. of Surg., August, 1899.
7. Lancet, June 4, 1898.
8. Ann. of Surg., June, 1907.
9. Lancet, November 14, 1896.
10. N. Y. Med. Jour., Sept. 8, 1906.

Local Reduction of Sensation of Pain by Electric Current.—Winkler has been testing Leduc's intermittent electric current and the analgesia it induces. Leduc's communication on the subject of the "electric sleep" and anesthesia were described in these columns April 6, 1907, page 1221. Winkler has found the analgesia so pronounced that he uses it in electrolytic depilation. He has found static electricity extremely useful in reducing itching, but it does not reduce the sensation of pain like Leduc's intermittent current. He gives an illustration of his apparatus in the *Monatshefte f. prakt. Derm.*, Sept. 15, 1907.

THE DIAGNOSIS AND TREATMENT OF CONVULSIONS IN CHILDREN.*

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PHILADELPHIA.

Eclamptic attacks in infants and young children are so common that perhaps some apology is necessary for presenting a paper on this subject. For the reason that one is privileged often to note cases wherein mistakes in diagnosis and subsequent treatment have been made, it may not be an untimely matter for discussion at this meeting.

Convulsions *per se* do not constitute a morbid entity. The practitioner's disregard of this fact not infrequently leads to grave error in the management of an attack. It is insufficient to diagnose convulsions. By saying that a child has a convulsion one says no more than when he designates bleeding from the uterus or stomach respectively as menorrhagia or hematemesis. These are but scientific terms for symptoms. It becomes essential to diagnose the underlying cause of this symptom of nervous irritation in order to deal with it intelligently. Failure to recognize this elementary principle of pediatric diagnosis has led to disastrous results.

PREDISPOSING AND EXCITING CAUSES.

In seeking to learn the etiologic factors we must recognize certain conditions of the economy as predisposing and others as exciting. In this manner a diagnosis becomes a matter of comparative ease. Among the predisposing causal elements infancy itself is of no little importance. Thus, according to the statistics offered by Cotton, 45 per cent. of all cases occur during the first six months, 22 per cent. during the second six months, 25 per cent. during the second year, 5 per cent. during the third year, 2 per cent. during the fourth year and 1 per cent. during the fifth year. It would, therefore, appear that these figures concur with the observation of Kassowitz that 80 per cent. of all cases occur before the end of the second year.

As to why this period of life is more prone to eclamptic attacks has not been definitely proved. It is well known that reflex disturbances are not uncommon at this time. This has been ascribed somewhat indefinitely to the instability and irritability of the growing nervous system. In the healthy infant incoordinated movements of all kinds are its means of exercise. These movements seem to be accomplished without volition. Thus it appears that the motor centers of the brain are well developed and are easily made to functionate by reflex or direct irritation, but that the centers of voluntary control are comparatively inactive. Saltmann states that there is an imperfect development of the psychomotor inhibitory center, together with increased reflex excitability of the peripheral nerves.

This lack of nervous equilibrium and susceptibility to reflex irritation is increased by certain constitutional diseases which are dependent on or associated with improper methods of feeding and certain toxemias. In this manner the nutrition of the brain and spinal cord is directly impaired. Convulsions are, therefore, more common among artificially reared children, as the prevalence of improper feeding methods is directly responsible for chronic nutritional disorders. Pre-eminent among these stands rickets. Scurvy, anemia, marasmus, syphilis, tuberculosis and hemorrhage are conditions which act in a similar manner.

HEREDITY.

It would seem, too, both from clinical observation and from authoritative statement, that heredity assumes a potent etiologic influence. The offspring of a hysterical mother or a neurasthenic father will perhaps inherit an irritable nervous system. In other instances the effect of heredity appears more direct in that a history may be obtained wherein several children of the same parents have all suffered from convulsions in childhood. Thus J. Lewis Smith quotes the experience of Bouchut, which included a family of ten all of whom had had convulsions. One of these married and had ten children, all save one of which developed infantile eclampsia. Females, according to Holt, are more susceptible to hereditary influence than males.

In attempting the diagnosis of the exciting factor it is essential to bear in mind that the convulsive attack may result from direct irritation of the motor ganglion cells of the cortex or from reflex or toxic irritation of the same cells and the reflex centers of the cord. In the last instance the convulsion is usually tonic in character. The successful treatment is dependent directly on a correct etiologic diagnosis. This can be best accomplished by pursuing a systematic process of elimination. It should also be remembered that the same factor may produce a convulsion by reflex action and by the production of toxins. This is particularly illustrated by certain gastrointestinal conditions.

THE CARDINAL SYMPTOMS.

Of the utmost importance is the determination of the temperature, the elucidation of a correct history, the age of the patient, the presence or absence of unconsciousness, the character of the onset and the degree of involvement.

FEVER.

A rapid onset of fever, associated with a convulsion and a rapid disappearance of both, might suggest that the latter was directly dependent on the rise in temperature. Fever, however, more often indicates some toxic condition which is responsible for both the abnormal temperature and the convulsion. If the degree of fever be very high, between 104 F. and 106 F., the onset of an acute infectious disease should be considered. This refers not alone to the exanthemata, but more especially to apical lobar pneumonia, where the convulsion, in a very young infant, replaces the rigor of the adult. Other toxic causes indicated by fever are to be classed among the gastrointestinal disturbances. In cases of this type the rise, varying between 100 F. and 103 F., need not necessarily be high. These cases are by far the most common and result directly from overfeeding and improper feeding. As indicated, food, in these instances, assumes the rôle of a foreign substance and, by undergoing putrefactive decomposition, permits the absorption of ptomains. Thus in all cases associated with fever acute gastric and acute intestinal indigestion become leading etiologic possibilities. The diagnosis of either of these conditions must, if possible, include the particular substance responsible for them. A milk curd, nuts, fruit seeds, bananas, orange pulp, pieces of apple or undigested meat fiber are most commonly met.

In rachitic subjects chronic gastrointestinal catarrh

* Read in the Section on Diseases of Children of the American Medical Association, at the Fifty-eighth Annual Session, held at Atlantic City, June, 1907.

may be diagnosed, but, in the presence of fever, constipation becomes a potent factor. Meningitis might be indicated by an irregular temperature, especially if, in the presence of other suggestive symptoms, the convulsion is repeated.

A normal or subnormal temperature would be compatible with certain toxemias, reflex irritation or brain disease. Asphyxia, seen late in severe cases of pertussis, uremia incident to post-scarlatinal nephritis, colic and intestinal parasites are causal factors included within this category.

VALUE OF A CAREFUL HISTORY.

A careful history and the age of the patient would aid in reaching a correct conclusion. A recent indiscretion in diet or prolonged improper feeding methods would again direct attention to the gastrointestinal tract. A convulsion in a new-born infant would have a different significance from one occurring in an older child. Forceps pressure or a prolonged labor producing cerebral trauma, asphyxia or atelectasis could occur in a new-born infant, while dentition might with rarity be diagnosticated as the cause if the convulsion were met during this period. Many practitioners still regard this as an important etiologic factor. My own opinion is that teething never causes sufficient irritation to produce a convulsion. In a practice covering seven years, and including many hundreds of dispensary and hospital infants, it is impossible to recall a single case of infantile eclampsia due to dentition.

A history of frequent attacks might suggest epilepsy. In this connection the age of the patient would be of importance. Infancy would perhaps preclude the possibility of epilepsy, although Henoch reports a case one year old. During this period the diagnosis of this disease must be regarded with caution and yet with considerable doubt, even though the convulsion may resemble the epileptic type. This statement applies as well to older children. Instances of unconsciousness associated with momentary tonic spasm and cyanosis, following a fit of anger or crying, are erroneously regarded as epilepsy. Epilepsy is indicated by an aura, tongue biting, a history of heredity, the stigmata of degeneration and an absence of fever. It must also be clearly determined that no other cause is operative before epilepsy is diagnosed. With reference to this disease Eustace Smith has noted convulsive attacks in rickety neurotic children from reflex causes as late as the eleventh or twelfth year and that they disappear with the removal of the cause. F. J. Campbell also recites the history of a 13-year-old boy treated for epilepsy, who was cured by circumcision performed for phimosis and balanitis and in whom no convulsions recurred after ten years of observation. Laplace advocates circumcision, meatotomy, adenoidectomy and splitting the frenum liguæ in cases of repeated convulsions, occurring in older children, before the final diagnosis of epilepsy is made and in whom the indications for these operations exist.

In cases where the convulsion is due to drugs, as strychnin, or to a disease, as tetanus, the history again and the character of the convulsion would be of considerable aid. In the latter instance the season of the year would even be of some value.

The diagnosis may indicate organic brain disease other than meningitis and the conditions already detailed. In other cases the presence of fever, unconsciousness and the extent of the convulsive movement would be of considerable value in determining the character of the lesion. Tumor, gumma or abscess must be differentiated. Abscess could be associated with fever and give a history of ear disease or head injury. All of these conditions would perhaps be associated with persistent vomiting and local spasm. The use of potassium iodid should not be omitted between attacks. The character of the gait would be of little value except in older children. Exaggerated reflexes would be present in all these conditions. Inspection of the eye grounds should be practiced. Later spasm would be replaced by paralysis and spasticity.

With reference to unconsciousness associated with local or unilateral spasm in their relation to brain disease, it may be stated that the last is not always responsible for the second. While cerebral in origin the cause is undemonstrable and evanescent and is perhaps vasomotor. It occurs with greatest frequency in rickets and is exemplified by head-nodding and the so-called rotatory spasm, although in these conditions consciousness is retained. Consciousness is lost in the majority of cases met in practice to which the term convulsion is applied. This results from the action of toxins on the centers of intellect. Therefore, if possible, a bedside examination of the urine should be made.

Reflex irritants may act either through the special senses or through the sensory nervous system. A careful history would also aid in deciding this. Sudden joy or, more especially, sudden fright or intense anger, may be operative. Pain, dependent on injury, burns, intestinal, renal or hepatic colic, is a common cause acting in this manner.

Thus the physician should realize that in diagnosing the etiologic factor of a convulsion how protean the causes are and should approach each case unbiased and should by a thorough physical examination, close observation and elimination exhaust the diagnostic possibilities of the case.

PRIMARY TREATMENT OF THE CONVULSION.

It can readily be appreciated that the removal of the cause constitutes the prime object of treatment. As this is not always determinable a rational plan of treatment would be one which, carried out with thoroughness and dispatch, controls the convulsion and, in the majority of instances, embraces the removal of the cause. To control the emotions of those near to the infant, as well as the convulsion, chloroform acts most quickly and is the safest of anesthetics. It should be employed promptly in all cases and may be continued intermittently for hours, if necessary, until other measures have had an opportunity to act. Emetics are correctly indicated if the history points to a very recent indiscretion in diet. Ipecac may be poured down the infant's throat and in older children an appropriate hypodermic injection of apomorphin is efficacious. If for any reason it be inadvisable to use emetics, stomach washing, so easily accomplished in infants, is a hydrotherapeutic remedy of the greatest value. By the combined use of emetics and stomach washing a case of convulsions was quickly cured in a 3-year-old child who was carried into my clinic at St. Joseph's Hospital one-half hour after devouring a whole pie.

HYDROTHERAPY.

Hydrotherapeutic measures, when intelligently and thoroughly employed, embrace within their scope the removal of a larger number of etiologic factors than any other means of treatment. Reference has just been made to stomach washing. More good can be accomplished by colonic irrigation than by any other single

remedy; for its antipyretic effect it can not be surpassed. When given to meet this indication the temperature of the water should vary between 50 F. and 90 F. A rapid reduction in temperature can thus be accomplished without shock.

The mechanical effect of colonic irrigation constitutes one of its best features. The toxic and reflex action of foreign substances, thereby removed from the lower bowel, is destroyed. A certain amount of fluid is permitted to remain within the bowel, and its subsequent absorption favors the dilution of toxins, already absorbed, and their easier elimination by the kidneys. By its cleansing effect on the lower bowel the latter is prepared for the reception and for the absorption of medicaments.

A proper technic is essential to the successful accomplishment of any desired effect from a colonic irrigation. The fluid must be sterile and may be plain water, physiologic saline or a weak bicarbonate of soda solution. The quantity of fluid depends on the object sought; if to reduce fever, irrigate until the fever is reduced; if to cleanse the bowel, until the fluid comes away clear. A low enema should precede the irrigation where constipation exists. An anointed soft rubber catheter, 18 to 22 French, attached to a container, is introduced just within the internal sphincter. The fluid is allowed to flow while the buttock is pressed together. This maneuver causes ballooning of the rectum and permits of the gradual passage of the catheter, for its full length, into the bowel. The pressure on the buttock is released and as the bowel fills the fluid and foreign substance are expelled by the side of the catheter. The container of the fluid should not be a small glass funnel, but a fountain syringe or an irrigating can holding at least two quarts. It should be placed from two to three feet above the child, which is held on its back or left side.

Balneotherapy also constitutes a valuable hydrotherapeutic measure. The reduction of temperature, the relief of internal congestion and of pain are its chief indications. Cold bathing should never be practiced, but cool or tepid baths are useful agents.

For the relief of internal congestion, even in the presence of fever, a hot bath, with ice to the head and spine, is strongly indicated. It may be replaced by the hot pack or the hot mustard pack. In cases of severe burns complete immersion of the entire body or part will give immediate relief from pain by excluding air and may at once restore the patient.

If his efforts have not been rewarded by a cessation of the convulsion and a return to consciousness, it now becomes the physician's function to cleanse the small intestine. To accomplish this the action of calomel is not sufficiently rapid. The best purgative is castor oil given in the dose of from one to two fluid ounces, alone or combined with the spiced syrup of rhubarb. Failing with castor oil to secure a rapid bowel movement, croton oil, m. ¼, dissolved in olive oil, f. ʒi. has been employed in occasional cases with admirable effect.

Hypnotics and antispasmodics are indicated in the majority of cases, but these remedies are not to be employed indiscriminately in all instances, and especially not until temperature has been reduced and the gastrointestinal canal has been emptied. It must be clearly borne in mind that these agents, like anesthetics, are used symtomatically and will not cure the convulsion until the cause is removed. It is in this connection that the greatest number of mistakes in treatment is made. Children are deluged with anesthetics and hypnotics to control the convulsion only to increase the depth of the coma and to permit the exciting factor to continue operative when the effect of the drug wears away, if the patient survive. In this fact perhaps lies the correct explanation of those cases wherein thirty or more convulsions are counted within twenty-four hours.

The best hypnotic is chloral hydrate dissolved in water and given per rectum following the colonic irrigation in the dose of 4 to 10 grains. It should be repeated, if necessary, within two hours, and may be administered alone or combined with double the amount of sodium or potassium bromid. Morphin, gr. 1/48 to gr. 1/16, given hypodermically, possesses a valuable and rapid effect in cases wherein the medicinal enema is expelled. In the majority of instances it is, however, unnecessary. Its constipating effect may constitute an important contraindication to its use.

Surgical interference should be practiced whenever indicated to remove an exciting factor. Gum lancing is seldom required. If the treatment just detailed has not effected the removal of the cause, further diligent search should be made. Recurrent attacks are best prevented by permanently removing the etiologic factors and by so arranging the child's dietary and general environment as to be most conducive to health and the development of a robust nervous system.

DISCUSSION.

DR. EDWIN E. GRAHAM, Philadelphia, did not recall having seen a case of convulsions due to dentition, but agreed with Dr. Lowenburg that the physician ought to exhaust all the diagnostic possibilities of the case before he makes a diagnosis as to the etiology of convulsion. The diagnosis of convulsions due to dentition, he thought, is one that may be made, perhaps, occasionally, but certainly never before a thorough and exhaustive examination has excluded all other causes.

DR. A. ABT, Chicago, asked Dr. Lowenburg whether he would advise a minimum dose of morphin, given hypodermatically, during the seizure, perhaps, 1/100 of a grain.

DR. JULIUS GRINKER, Chicago, referred to convulsions in childhood as an etiologic factor in epilepsy, or rather as the beginning of epilepsy. In many cases no gastrointestinal disturbances could be discovered and the "fits" were called convulsions of dentition, but the cases had not been followed up after the dentition period. Periods of dentition and puberty, he said, are the two periods of life during which epilepsy has its beginning. A history of convulsions during dentition often gives the clue to epilepsy, and he thinks every case in which a diagnosis of convulsions due to dentition has been made should be considered as epilepsy until proven to have been something else.

DR. H. M. MCCLANAHAN, Omaha, Neb., has followed some patients almost to adolescence. In a child having convulsions when the cause can not be ascertained, he always fears that it is what may be called organic. In fact, a convulsion occurring in childhood without any apparent cause is a very suspicious circumstance, particularly if it occurs several times within a year. He now has a girl, 16 years old, under his care, who was attended during the first year of her life for convulsions and who now has epilepsy.

DR. H. LOWENBURG, Philadelphia, speaking of dentition as a causative factor, said that he only gave his own experience, which covers a period of about six years. In answer to Dr. Abt's question, he stated that morphin, gr. 1/40 to 1/16, has a good effect, but in the majority of instances it is unnecessary and its constipating effect may contraindicate its use. It should never be used until the bowel is evacuated. In regard to epilepsy, his impression is that many children have convulsions in infancy who do not become epileptics. The majority of children who have convulsions do not become epileptics. He does, however, believe that a child who has had convulsions in infancy is more liable to develop epilepsy later in life than one who has not had them.

GANGRENE OF THE LUNG IN EARLY LIFE,

WITH REPORT OF A CASE IN A CHILD OF TWO YEARS.*

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Although pulmonary gangrene is uncommon in early life, numerous cases appear in the literature. It is more frequent in children than the analogous condition of pulmonary abscess; for in reviewing the literature on these subjects, one discovers more instances of gangrene than of the latter affection. J. Renault[1] states that one case is seen in children or adolescents to six or seven in adults, and in the Children's Hospital, Philadelphia, only one case is recorded between the years 1896 and 1906. Henoch[5] affirms, on the other hand, that children suffer more than older persons.

The majority of the cases in early life occur between 2 and 16 years of age, yet many instances are recorded as having occurred at a still earlier period. Thus, Bednar (Renault[1]) saw the disease at two and three months; Steiner and Neuretter (Renault[1]) at one and four months; while Kohts (Renault[1]), W. L. Carr,[2] G. Thinon[3] and others have each reported cases within the first year of life.

ETIOLOGY.

Gangrene of the lung is almost always a secondary affection; very exceptionally is it primary. It usually occurs in debilitated subjects, but, as in cases observed by Rilliet and Barthez,[4] it may attack children in robust health. It may supervene in the course of any of the infectious diseases, but it follows measles more frequently than any other acute infection. Contusions of the chest, dilated bronchi and putrid bronchitis, tuberculosis, abscess and apoplexy of the lung, pneumonia (lobar and catarrhal), emboli (from caries, gangrenous processes of the skin, vulva and vagina, abscesses, etc.), and the aspiration of food and foreign bodies, have all been found associated with this affection. Of these pneumonia, particularly bronchopneumonia (only rarely the fibrinous variety), emboli, and the aspiration of foreign bodies, are by far the most common causes in children. Rilliet and Barthez[4] give to tuberculous bronchopneumonia a high place among the predisposing causes of pulmonary gangrene, while Henoch[5] regards general systemic weakness, as in exhaustive diseases, through the slowing of the circulation and the consequent tendency to thrombosis, as an important etiologic factor.

More cases are due to aspiration than is commonly supposed. Thus weakly and marasmic infants may readily aspirate, unnoticed, small particles of food; and septic materials from necrotic processes in the mouth and upper air passages, and foreign bodies, may likewise gain admission to the lung in this way. That the offending material is not always found at autopsy or operation does not militate against this view, for Karewski (H. v. Schrötter[6]) states that in fourteen operative cases the offending body was discovered only once. In 1899 Guillemot[7] called attention to the association of otitis media with pulmonary gangrene in children; among ten cases observed by him seven were of otitic origin.

But whatever the associated condition, the entrance of the bacteria of putrefaction into the lung is essential for the production of gangrene, the already existing affection of the pulmonary tissue merely affording a favorable soil (Strümpel[8]). According to Renault, the microorganism most frequently encountered in gangrene of the lung is the streptococcus. Bonome (Aufrecht[9]), on the other hand, regards the staphylococcus as the cause of the disease. This also was the organism found at every examination of the sputum of my patient, while a microphyte not corresponding to any of the regular forms was isolated in three cases studied by Hirschler and Ferray (Aufrecht[9]). It is probable that various bacteria may be present in pulmonary gangrene and that the particular bacterial cause has not yet been discovered.

While gangrene of the lung is usually encountered in two forms, the circumscribed and the diffuse, the latter is the one more frequently seen in children, who differ from adults in that, instead of one center, several areas of necrosis are likely to be scattered throughout the lung. The disease is usually unilateral, and in the lower and superficial portions of the lung, but both sides may be affected. In very young infants the diffuse variety is sometimes seen—more often, indeed, than in adults (Renault[1]). In still another variety the gangrenous process begins in a portion of the lung situated beneath the visceral pleura, which is destroyed, and gangrenous empyema or pyopneumothorax occurs.

SYMPTOMATOLOGY.

As pulmonary gangrene is almost invariably a secondary process, the symptoms of the primary affection (or the history of traumatism or of the aspiration of a foreign body) always precedes those of gangrene proper. The general symptoms are usually out of proportion to the local signs: prostration, lividity, sweats, jaundice, anorexia, vomiting, diarrhea and remittent temperature are commonly present. Associated with these there is marked fetor of the breath, at times so intense as to be perceptible some distance away from the patient or even to fill the room. This, a sign of the greatest significance, is often absent in children—failing, according to Renault,[1] in two-thirds of the cases. All authors agree, however, that this symptom, when present, is of the highest diagnostic import; although in estimating its value, care must be taken to exclude necrotic processes in the mouth and upper air passages, so common in children.

As children under 5 years of age never expectorate, and only rarely up to that of 10 and 12, the sputum so characteristic of pulmonary gangrene is seldom seen. When present, and in older children, it does not differ from that of adults, being of a dirty, greenish hue, separating on standing into three layers, and containing fat crystals, leucin, tyrosin, hematin crystals or blood, Dittrich's plugs, dark pigment granules and elastic tissue. The latter is often absent, according to W. Fox[10] and Aufrecht,[9] the gangrene having a tendency to destroy it, differing in this respect from abscess, in which particles of lung tissue are a constant accompaniment. The amount of sputum varies: A young child, after coughing, may bring up small quantities of foul sputum,

* Read before the Philadelphia Pediatric Society, June 11, 1907.

1. Grancher et Comby, Traité malad. de l'enfance, second ed., Paris, 1904, iii, p. 502.
2. Arch. Ped., 1902, p. 176.
3. Jour. d. Sci. med. de Lille, ii, 1905, p. 228.
4. Traité d. malad. d. enfants, Paris, 1861.
5. Vorlesun. u. Kinderkrankh., Berlin, 1903, eleventh edition, p. 827.
6. Med. Klin., Berlin, 1905, i, p. 547.
7. Recherch. s. la Gang. pulmon., Thèse de Paris, 1899.
8. Textbook of Medicine, 1893, p. 241.
9. Nothnagel's Spec. Path. u. Therapie, Wien., 1899, xiv, 2, p. 419.
10. A Treatise on Diseases of the Lungs and Pleura, London, 1891, p. 444.

or larger amounts may be expectorated, several ounces at a time. At times the child must be inverted so as to empty the cavity completely.

Hemorrhages are common, Rilliet and Barthez[4] claiming that they are present in one-fourth of the cases, either merely streaking the sputum or amounting to actual hemoptysis. The cough is liable to be paroxysmal, giving no rest and often completely exhausting the patient. Adults may lie on the affected side, but in children, particularly young children, the position assumed is indifferent.

PHYSICAL SIGNS.

The physical signs of gangrene of the lung are not of especial significance in themselves; it is the order of their evolution, taken in connection with the general symptoms, that is important. If during the course of a pneumonia, particularly a secondary pneumonia, there appear localized signs of consolidation, gradually developing into those of a cavity, with marked fetor of the breath and the general hectic symptoms (i. e., prostration, remittent fever, sweats, emaciation, etc.), the diagnosis of gangrene is warranted. It must be borne in mind, however, that fetor may be absent, and that signs of consolidation and constitutional symptoms may be the only evidences of the affection present. Signs of a cavity may also be wanting, especially in the diffuse form of gangrene. The condition, in fact, may be entirely latent, the true nature of the ailment being first recognized at the autopsy table. This latent form is more common in children than in adults, particularly in very young children and infants. Holt,[11] W. L. Carr,[2] Henoch,[5] Vargas (Carr,[2] Huber[12]) and others have reported cases of this nature. Traube (Aufrecht[9]) knows of only three signs on which we can certainly decide that there is destruction of the lung tissue, namely, metallic phenomena (i. e., cavernous signs) developing under the eye; the presence of elastic tissue (often absent); and a stinking breath and sputum, with the presence of fine black pigment granules in the latter. The differentiation of the diffuse from the circumscribed variety is not possible during life. Finally, the diagnosis of pulmonary gangrene is often impossible, and is quite often but a conjecture, to be absolutely confirmed at autopsy only.

The most frequent complications are purulent pleurisy and embolic phenomena in the brain, kidneys, spleen, skin, etc.

PROGNOSIS.

The prognosis is grave at all ages, but especially so in children—the majority of the cases, unless relieved by operation, ending fatally. Restoration to complete health is sometimes seen, the sputum gradually losing its fetor, and the local and general signs disappearing; but relapses, which may prove fatal, are liable to occur (W. Fox[10]). Instances of spontaneous recovery are reported by Huber[12] (after coughing up a portion of a peanut); by Cassoute[13] (a child of 10 years, following bronchopneumonia); by Stahlman[1] (a child of 12, recovering in three weeks); by Goodhart and Still[14] (three cases accompanying bronchopneumonia), and by Kohts (Renault[1]) (child of 4, following measles).

THE TREATMENT.

The treatment of pulmonary gangrene in children does not differ from that in adults; operation, as offering the only hope of recovery in the majority of cases, should be carried out whenever practicable.

A careful consideration of the natural history of gangrene of the lungs in early life, as described in the foregoing remarks, is sufficient warrant, I believe, for placing on record the following case as an interesting example of this rare affection in a very young child. The case is, also, of much practical interest, because complete recovery followed through medical measures alone:

CASE HISTORY.

History.—H. B., aged 2, colored, a fairly well-nourished but rachitic boy, of uneventful previous history, was admitted to the Children's Hospital, Oct. 23, 1906. The child had been taken suddenly ill that morning with high fever, prostration, vomiting and cough.

Examination.—He presented, on admission, in addition to these general symptoms, a temperature of 104.3 F., a pulse of 168, respirations 70, fine râles throughout both lungs, and slight dulness at the right apex. Three days later decided evidences of consolidation were noted at the right apex, posteriorly, and, to a less extent, on the left side near the angle of the scapula. A diagnosis of acute bronchopneumonia was made, and appropriate treatment was instituted.

Subsequent History.—During the next two weeks the course of the child's illness was characteristic of acute bronchopneumonia; the temperature was remittent, ranging between 101 and 106 F.; the pulse between 140 and 70; the respirations between 40 and 80; much prostration, diarrhea and unchanged physical signs. The urine was negative; the leucocytes numbered 17,760; the hemoglobin, 60 per cent. At the end of the second week the cough became severe, paroxysmal and laryngeal in character. Two examinations of the larynx by Dr. Francis R. Packard revealed nothing beyond a normal pharynx and slight reddening of the laryngeal structures. Repeated cultures failed to show the presence of the Klebs-Loeffler bacillus. The odor of the breath now became fetid. Three days later (November 9) the patient began to bring up, at irregular intervals, after severe paroxysms of coughing, dark yellow and greenish sputum, a dram, or several drams, at a time. The expectoration was of an exceedingly foul and putrid odor, quite perceptible at a distance from the vessel containing it. Examination, by Dr. C. Y. White, of this sputum showed pus, staphylococci, no tubercle bacilli, no elastic tissue and no fatty crystals. The quantity of the sputum was not sufficient to determine layer-separation on standing.

Very marked dulness was now apparent on the right side, high in the axilla, and posteriorly, near the angle of the scapula. The condition of the left lung was unchanged, while throughout both lungs were numberous râles. Two exploratory punctures were made in the post-axillary line, in the sixth and seventh interspaces, but with negative results, except that the second puncture was followed by considerable subcutaneous emphysema (which rapidly disappeared), the expectoration of a small quantity of blood, and marked signs of collapse, from which the patient quickly rallied under the use of stimulants.

During the third and fourth weeks the condition remained unchanged. The paroxysms of coughing were severe and accompanied with the expulsion of the same putrid material, the discharge of which was greatly facilitated by inverting the patient. By resorting to this procedure immediately at the onset of a coughing spell, it was found that the expulsion of sputum was greatly facilitated and the paroxysm materially shortened, thus sparing the child much exhaustion. The breath was intensely fetid, and was perceptible some feet from the patient's crib. The prostration was severe, the appetite completely lost, the temperature remittent (from 99 to 102 F.). There was diarrhea and loss of weight (four pounds less than on admission). The leucocytes numbered 24,600; the hemoglobin 50 per cent.

About this time signs of a cavity gradually developed in the right posterior axillary region, between the fifth and seventh ribs, i. e., over the already dull area appeared suberepitant, enlarging into mucous, râles, amphoric breathing, and a dull

11. Arch. of Pediat., 1885, p. 88.
12. Arch. of Pediat., 1902, p. 171.
13. Cong. Period. de Gynecol., d'Obst. et de Pediat., 1898, p. 817.
14. Dis. of Children, eighth edition, London, 1905, p. 313.

tympanitic note on percussion. At different times four exploratory punctures were made, but all were negative, revealing only a little blood. In one only was there any growth, consisting of blood cells and cocci. A Roentgenogram was now made at the Presbyterian Hospital, but it was unsatisfactory, showing, as far as the radiographer could determine, that the affected area was in the center, probably of the upper part of the lower right lobe, too deep to be reached by the exploratory needle. Further examinations of the sputum differed little from the previous ones. Staphylococci were always present; at one time the *Staphylococcus pyogenes aureus* in pure culture. Once hematin crystals were found. Fatty crystals, leucin, tyrosin and elastic tissue were never seen, nor was sufficient sputum ever collected to demonstrate the characteristic three-layer separation. Once a slough, the size of one's little finger-tip, was expectorated; but this, through some unfortunate error, was misplaced or lost. The patient at this stage had lost six pounds.

By the fifth week slight improvement had begun, the temperature falling to 98 and 99 F., the appetite and strength increasing and the sputum becoming more natural. The improvement continued during the sixth and seventh weeks, so that by the close of the latter the weight had increased two pounds. With the beginning of the eighth week the little patient had a relapse, the temperature suddenly rising to 104 F. The cough again became paroxysmal, with puriform expectoration, although less in amount and with less odor than formerly. The cavernous signs still persisted. The leucocytes numbered 19,440; the hemoglobin 60 per cent. This condition lasted until the end of the ninth week, when improvement again set in. On January 16, at the end of the twelfth week, the child was discharged, completely recovered, and weighing 22 pounds and 2 ounces, or 2 ounces more than on admission.

Some days later (January 20) the child was again admitted (to Dr. Griffith's wards). Examination revealed a pneumonic consolidation of the upper part of the right upper lobe, with concomitant fever (104 F.), respiration 60, and pulse 140; moderate cough, but no sputum. Recovery was complete in a week. When discharged, the following signs were noted by Dr. Griffith: Feeble breath and voice sounds behind and in right axilla (posterior), with dulness. The right side appeared, possibly, smaller than the left, but expansion was good. The treatment of the gangrenous attack consisted in supporting measures, viz.: port wine, iron, quinin, cardiac stimulants (digitalis), creosote by mouth and inhalation, and, especially, almost continuous life in the open air, in which the little patient spent all but the night hours in every variety of weather, and to which I attribute, almost entirely, the remarkable recovery from what was at one time a truly desperate condition.

There seems to be little doubt as to the correctness of the diagnosis in this case. The extreme prostration, the cough, the fetid breath and sputum, not accounted for by any affection of the mouth and pharynx, and the cavernous signs gradually developing under the eye, leave room for no other conclusion. The absence of elastic tissue may be explained by its frequent absence, according to some observers (Fox, Aufrecht), in pulmonary gangrene. The fact that the sputum did not separate into three layers I can not explain except that, perhaps, a sufficient quantity was never collected, and, possibly, because the experiment was made in a test-tube instead of in a conical glass. Dr. H. R. Wharton saw the patient several times and signified his willingness to operate whenever I could accurately locate the seat of gangrene, but as this was never quite possible, surgical intervention was constantly deferred until the child's improvement rendered it unnecessary.

The continuous open-air treatment is worthy of especial emphasis, for to it the remarkable recovery was, no doubt, in large measure, due.

TREATMENT OF PURULENT OPHTHALMIA.*

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By purulent ophthalmia we usually understand that form of conjunctivitis characterized by a flow of pus and due to gonococcic infection, and from this standpoint I will discuss this question. The forms of purulent conjunctivitis of gonococcic origin, which are the most common, are ophthalmia neonatorum, the purulent ophthalmia of the adult, and a third form, quite rare in some localities, namely, the purulent conjunctivitis of young boys and girls.

PROPHYLAXIS.

As "an ounce of prevention is worth a pound of cure," I shall presume that we are apprised of the possibility of infection in any given case, either remotely or immediately, and hence shall refer to the prevention, if possible, in any such given case. Prophylaxis in ophthalmia neonatorum is so well known and thoroughly established that simple reference to this important procedure at once suggests Credé's method, introduced in his practice in the Lying-in Hospital of Leipzig in 1880, whereby the percentage of cases was reduced from 10.8 per cent. to 0.1 or 0.2 per cent. This record is sufficient to commend the practice where even the remotest possibility of infection exists, as well as to condemn the failure to resort to it.

In the case of all individuals who are suffering from a specific urethritis great stress should be laid on absolute cleanliness of hands, linen, towels and utensils, and in some, if not in all cases, segregation should be required. In addition, the patient must be impressed with the importance of these measures, as they relate to the infection of the eye. In the case of young girls or boys who are exposed to infection from a known existing source they should be separated as far as possible from that source. If they themselves are the subjects of infection other than about the eye then their parents or responsible attendants should be warned and all necessary precautions taken to prevent this complication.

TREATMENT.

But presuming that the period for prophylaxis has passed and infection has occurred, several questions at once present themselves for consideration. The first is that of cleansing and keeping the eye free from secretions. The primary object of this procedure is to free the eye of pus, which is rapidly formed; this is most important, and for this purpose many solutions have been suggested and used. As boric acid is always at hand and its solutions are not dangerous in the hands of average attendants, I usually resort to a saturated solution of this agent, though when cleaning the eye myself I frequently use a solution of bichlorid of mercury, 1:10,000. Artificial aids to irrigation I have not used, but rather depend on the ordinary method of cotton pledgets dipped in the irrigating solution and squeezed into the eye. As to frequency of cleansing, it should be resorted to as often as is necessary to keep the eye free from pus. This varies from every few minutes to every hour or two, according to the case, the stage of the inflammatory process or amount of pus being produced.

*Read in the Section on Ophthalmology of the American Medical Association at the Fifty-eighth Annual Session, held at Atlantic City, June, 1907.

COLD APPLICATIONS.

In the early stages of the attack the use of local applications of cold has been advocated by some and condemned by others. Touching this measure, I may say that it may give relief to symptoms and perhaps be used with safety in cases of robust adults where the cornea is not involved, but in infants or young children difficult to manage I do not use it. The chief danger in cold is that if it is applied to the point of efficiency as to temperature and length of time it is apt to reduce the nutrition in the cornea to a point where ulceration is set up and the condition seriously complicated. In view of these dangers from the use of cold it should be used, when used at all, to combat the pain by relieving the congestion, and then only for a few minutes (five to ten) at a time, with long intervals between the applications. Even in hospitals where house surgeons and trained nurses of experience are charged with its use it should be resorted to tentatively only, but in the general run of private practice it is a two-edged sword as a routine procedure.

SURGICAL TREATMENT.

Surgical procedures are resorted to by some in the conduct of these cases, such as the scarification of the chemotic ring about the cornea, or if the cornea is threatened by the pressure of the swollen and tense lids, a canthotomy, or even the vertical splitting of the upper lid. As to the first procedure, the time and the frequency of resorting to this must depend on the judgment of the physician. As to canthotomy, it should be done only when the pressure symptoms are severe and prolonged; fortunately this is not often; as to the vertical splitting of the upper lid, I think it is rarely necessary, and then in extreme cases only. In this connection I think I am justified in saying that in the great majority of cases, if early seen and vigorously treated, the necessity for surgical interference is reduced to the minimum, and fortunately so, for we thus avoid making a port of entry for the invader.

Last, but not least, we should resort to Buller's shield in all cases of infection of one eye only. A word concerning this protective measure may be said at this point: Before applying the shield the eye should be thoroughly cleaned and disinfected with a solution of protargol, twenty to thirty grains to an ounce of water, and the shield so applied that it will be open at the outer and lower angle so as to provide proper ventilation, which prevents the clouding of the lens by moisture from the eye. The watch glass used should be as large as convenient and clear so the eye is at all times easily inspected.

MEDICINAL TREATMENT.

Now as to active treatment looking to the combating of the actual pus-producing agent. If I have reason to believe from the history of the case that the infection is due to the gonococcus, even though the pus has not made its appearance, I make it a rule to begin at once the active treatment of the condition, taking no chances, for I believe that much good can be accomplished at this time. I instil into the eye a 5 to 10 per cent. solution of protargol, order a wash of saturated solution of boric acid and give the patient a prescription for the following solution, which is to be put in the eye freely and frequently during the day, after cleaning:

℞. Hydrastin acetate	gr. i-ii		.065-.13
Boric acid	gr. x		.65
Borax	gr. xx	1	.3
Tr. opium (deod.)	m. xv		.92
Distilled water q. s.	℥i	30	

In order further to safeguard the patient it is well to order the protargol solution and have it used several times during the interval between visits. At this point I take occasion to say that the above prescription has proved a most valuable adjunct in the treatment of these cases. It is the original Scott mixture, with hydrastin acetate[1] substituted for the hydrastin sulphate, the former being more soluble, while at the same time it is germicidal in its action and has a specially beneficial action on the epithelium. If the patient is an infant or one suffering much from photophobia I instil into the eye a drop or two of atropin sulphate, gr. i, distilled water ℥i, to put the iris at rest, and then give full instructions to parents or patients, as the case may require, and have the patient report in twenty-four hours. My reason for beginning the active treatment at once is that if the gonococcus is present it is best to begin the use of such remedies as will destroy the infectious agent before it has had time to penetrate the deeper structures and thus limit the ravages of the disease. That protargol is an effective agent is well established by the experience of Myles Standish, who used it with great success in a large number of cases, while Davier and other foreign observers speak highly of it. Knapp, of New York, has also recently spoken of this agent in the highest terms, preferring it to the silver nitrate on account of the fact that it is more penetrating in its effect and less irritating. If then we have a remedy capable of destroying the gonococcus when present, and of producing no serious trouble, even if that germ should be absent, why not use it just as we do the 2 per cent. nitrate of silver solution in Credé's method. Again, if we can destroy some of the gonococci before they invade the mucous membrane we can limit, in proportion, the amount of inflammatory reaction, which consequently modifies the after-symptoms to such an extent that we have fewer complications, such as conjunctival chemosis and intense swelling of the lids. I can see no reason for waiting until we have a marked flow of pus before we resort to the use of those remedies which are capable of destroying the active pus-producing agent. This method of anticipating the condition is used, and with most gratifying results, by my friend, Dr. Savage, who has had considerable experience in the treatment of such cases. But to return to our patient. If on the morrow we find that the infection has progressed, and that there is more or less secretion, mucus and pus, it becomes necessary to institute a more vigorous line of treatment. The irrigation should be as frequent as is necessary to keep the eye free from secretion, and following each cleaning some of the hydrastin solution should be instilled into the eye, and at stated intervals—some three to six times in the twenty-four hours, as the case demands—a protargol solution of 10 to 15 per cent. should be freely used. If thought best by the attending physician, after a thorough cleaning, the lids may be everted and the stronger protargol solution applied by means of a small cotton mop. As to this procedure there is some difference of opinion on account of the difficulty in everting the lids, especially in children, as it is not wholly without danger to the cornea. Then, too, the free use of the protargol will cause it to permeate the utmost limits of the conjunctival sac and thus avoid the necessity of everting the lids for a direct application. By some nitrate of silver is regarded as the most reliable remedy to use, but it can not be used continuously nor

1. The hydrastin acetate is made by taking 2 grains of hydrastin alkaloid and 3 drops of acetic acid.

can it be used properly except by one of experience. If it is used according to the suggestion of de Schweinitz, that is, a 2 per cent. solution applied directly to the exposed conjunctiva with a cotton mop and then the pellicle washed off with a physiologic salt solution, in my opinion we have defeated the object in view. In removing the coagulated albumin and in the neutralizing of the excess of the silver we have at once removed the active germ destroyer and left behind an open field for the further invasion by the undestroyed gonococci lurking in the deeper layers of the mucous membrane. If at this point, that is, after the nitrate has been used, the excess neutralized and the pellicle removed by the physiologic salt solution, you follow immediately with the instillation of the protargol solution you have gained a double advantage, for the removal of the coagulum leaves behind a deeper level of the membrane which has not been penetrated by the nitrate, but in which the gonococci are still present, and it also immediately opens up a direct avenue through which the protargol can enter and destroy the enemy. In thus using the nitrate you have gained all that can be gained from this agent, for the coagulum is inert and in its exfoliation by natural processes it may become a source of irritation. Again you have cleared the way for another agent, which is both more penetrating and less irritating, and by reason of the fact that it can be used frequently and freely is more capable of producing beneficial results.

In this connection it might be well to call attention to a few facts concerning the action of silver salts, as recorded by experienced observers. Cushny says: "The precipitation of silver nitrate by proteids and chlorids confines its disinfectant action to narrower limits than those of some other antiseptics, and this has led to the introduction of a number of other compounds which are less easily dissociated, and, accordingly, less liable to be thrown out of solution." Continuing, he refers to argentamin, saying: "It penetrates better than nitrate of silver; but the alkaline diamin renders it somewhat irritating." Again he says: "Argonin, which is a combination of casein and silver, is soluble in water and, like argentamin, is not precipitated by chlorids and albumin."

Protargol, according to Porter, contains only 8 per cent. of silver, is an albumose of silver and quite penetrating, while argyrol contains 30 per cent. of silver and is a combination of silver and vitellin, and collargol contains 97 per cent. of silver. These percentages of silver in argyrol and collargol are considerably higher than those given by some. In a recent article[2] de Schweinitz, in referring to the use of argyrol, speaks of the experiments of Dr. Derby of Boston with this preparation, who found that it did precipitate in the presence of albumin and that it was exceedingly weak in bactericidal action. He further says that C. R. Marshall and E. F. M. Neave, of England, practically confirmed the conclusions of Derby, and "they found that argyrol, and also collargol, possess practically no bactericidal action whatever, and, moreover, that the percentage of silver which these compounds contain is no criterion of their bactericidal power. Therefore, any good effects, as they point out, which many clinicians maintain that they have obtained with argyrol, can not be attributed to any action which it has on bacteria, inasmuch as such action is practically *nil*."

Now, these reports are, to my mind, very pertinent, for I think they carry with them the probable solution of this question as to the most reliable silver compound to be used in these cases. We have seen that silver nitrate, which is a powerful antiseptic and germicide, is limited in its bactericidal action by reason of the fact that it is precipitated by proteids. This prevents it penetrating the deeper layers of the mucous membrane, and consequently it fails to reach the micro-organisms which lie beyond the coagulum produced, while, of course, those which are free in the conjunctival sac are destroyed by this very coagulation or precipitation, since they are proteid matter.

Again, argyrol, which contains, according to some, 20 per cent., and according to others, 30 per cent. of silver in the form of vitellin of silver, is a nucleo-proteid compound. Vitellin is a nucleo-proteid of that variety which, when decomposed, yields proteid and paranuclein. Now, proteids are not absorbed as such, but must be converted into proteoses or albumoses when absorption takes place rapidly, and it is said of paranuclein that it "is probably absorbable." Hence in this combination, argyrol, we have a feebly penetrating agent, and consequently one which can not be relied on to destroy those organisms which have penetrated the tissue with any degree of rapidity; therefore, development exceeds destruction of gonococci, rendering the remedy too slow and unreliable.

Protargol is an albumose-silver compound containing only 8 per cent. of silver, and it has proven effective in the treatment of this form of trouble on account of its penetrating capacity.

Attention has been called to the fact that proteids, as a rule, are absorbed only when they have been converted into proteoses or albumoses; that is, in order for them rapidly to penetrate animal membranes with facility and certainty they must be in this form. This being true, if we can get a recognized germicide in that form which can and will penetrate animal membranes we have an ideal agent to attack and destroy the gonococci, even though they are entrenched in the deeper layers of the conjunctiva. In protargol, the albumose of silver, we have an agent, highly germicidal in its action, meeting the physiologic demands for easy absorption or deep penetration. Clinical experience with protargol, in the Nashville City Hospital, in the practice of Dr. Savage, has fully demonstrated its value both as to its use in cases which had reached the stage of pus as well as in those in which it was used just after infection and before the symptoms developed. In the former the gonococci were not found in the pus after the third day, as a rule, and one of the house surgeons who became infected from a case under treatment, and who received the treatment as I have described it, was practically well in six or eight days.

As to the practical value of the method of treating these cases as I have outlined a case will illustrate. I operated on a young man for internal squint, tucking the external rectus and making an extensive partial tenotomy of the internal rectus. The operation was done on Tuesday, the stitch removed on Saturday. He was seen Sunday and all was well, but on Monday when I reached my office he was there complaining of the eye, saying it began to trouble him about 5 a. m. Examination showed considerable irritation, slight secretion, but no pus. I failed to get any history to fix the cause, but I cleansed the eye, ordered the boracic acid irrigating solution and the hydrastin mixture, used the protargol, gave him and his friend full instructions and ordered

2. Therap. Gaz., Jan. 15, 1907.

him to report that afternoon, which he did, and I found more secretion, slightly mucopurulent. Next day there was found marked purulent secretion, and I became convinced in my own mind of the cause, though I could not get it from either of the young men. I pushed the treatment, and next day when he was seen both he and his friend announced that they were the victims of specific urethritis. In twenty-four hours he had developed a case of epididymo-orchitis, though his eye was progressing nicely. By the middle of the next week he was practically well of his ophthalmia, and in a few days more the gentleman whom I had called in to treat his specific urethritis with complications had him ready to return home. This case offered every opportunity for a serious condition on account of the operation on the muscles, and I believe if I had waited for pus and positive history the result would have been quite different. This method of treating these forms of purulent ophthalmia has proven most satisfactory, being modified to meet the conditions presenting in individual cases. Serious corneal complications are very rare when cases are seen early, and in those of known specific infection, if seen before the stage of pronounced pus production and vigorously treated, are practically *nil*.

DISCUSSION.

DR. JOHN E. WEEKS, New York City, cautioned in regard to the severe reaction that may be produced by the instillation, as a prophylactic measure, of the strong solutions of silver nitrate. He thinks that the recommendation contained in the preliminary report of the committee that is investigating this subject, is very useful—that a solution of only 1 per cent. should be employed. In a number of cases he has seen severe reaction, and in one or two cases corneal destruction, caused apparently by the excessive use of the 2 per cent solution. Those who have had experience in lying-in hospitals know that simple cleansing measures, if properly carried out, with saline solution, weak bichlorid, or boracic acid, suffice to keep down the percentage of ophthalmia neonatorum in such institutions to a very low point. He said that he once had charge of a lying-in hospital for six months, and in that time there was but one case and that was where bichlorid solution—1 to 5,000—was used as a prophylactic measure.

Gonorrhea of the conjunctiva is much less severe in children than in adults. The diagnosis can often be made only by microscopic examination of the discharge. In these cases it is very necessary to ascertain the condition of the mucous membrane of the urethra. Dr. Weeks said that vaginitis is not extremely uncommon, even in very young girls. At one time, he said, he observed an epidemic of gonorrheal conjunctivitis in a residential school for girls—18 or 20 cases—and it was found that the source of this condition was a vaginitis in these girls. Other cases have come to his notice in which there was true gonorrhea of the mucous membrane of the urethra in very young boys.

He believes cold applications are of value, for two reasons: First, the patient is usually given a great deal of comfort and the congestion of the lids, the over filling of the vessels, is controlled to some extent. The applications should be made intermittently, and in the very early stage. The application is made for two or three hours, and then there is an intermission of one or two hours, and this is kept up for two or three days. Second, if cold applications can reduce the temperature of the conjunctival sac to 90 F. the development of the germs may be checked. The gonococcus does not develop well at a temperature below 90, but develops well up to a temperature of 110. Hot applications improve the developmental conditions, so far as the temperature is concerned; reduction of temperature to inhibit the development benefits the patient, provided the temperature is not so reduced as to interfere with the physiological action of the tissues. In a few cases he has been able to check purulent conjunctivitis. In two cases nitrate of silver, 2 per cent., was used; two applications in twenty-four hours. Ordinary cleansing and cold applications were also employed. The disease subsided without developing a pronounced case of purulent ophthalmia.

DR. J. T. HERRON, Jackson, Tenn., said that in ophthalmia neonatorum he does not use the bichlorid solution for cleansing the eye, but uses boracic acid solution and has the patient use it very frequently. He is very much in favor of argyrol in these cases. When he first began the practice of medcine he used nitrate of silver—then protargol—and then commenced using argyrol, and he has never had reason to regret it. He uses it in strengths of from 10 to 20 per cent., according to the severity of the case. He is sure that, in the last few cases, the disease has been cut very much shorter than it would have been. He said he never uses the cold compresses in these cases, but in the beginning uses the plain water from the wells, without ice. When it comes to gonorrheal ophthalmia in adults then he does not rely on argyrol, but the eyes are cleansed thoroughly every hour, or oftener if necessary. He had been in the habit of using nitrate of silver, but in the last few years has used protargol.

DR. J. F. BYINGTON, Battle Creek, Mich., said that continuous cold should be employed only in the very initial stages of an acute inflammation, and then should not be continued more than from 15 to 30 minutes without a short, intervening hot application to restore the circulation. Cold, too long continued, causes vasomotor paresis, increases congestion and stasis and thereby lessens the resistence of the tissues to infection. Hot applications for from 2 to 4 minutes at intervals of from 15 to 20 minutes eliminate the objectionable features of a continuous cold application. After the inflammation is well established he prefers hot applications, but in this stage there is no objection to making very short cold applications (lasting only a few seconds) between the longer hot applications. This treatment encourages leucocytosis and the antitoxic reaction of the tissues, which is an essential factor in the secondary stages of an infective inflammation. Sometimes hot applications may make the eye look worse, but their effect on the course of the inflammation is better than cold. He does not object to continuous cold at the start to retard the growth of the bacteria, provided short hot applications are made at reasonably frequent intervals.

He employs argyrol in 25 per cent. solution and sometimes stronger and has never found it irritating and it appears to control the discharge and inflammation much better than experiments in the bacteriologic laboratory would lead one to infer.

DR. HIRAM WOODS, Baltimore, said that about two years ago he tried to get information from lying-in hospitals concerning their experience with protargol and argyrol as substitutes for nitrate of silver. At the Sloan Maternity Hospital in New York protargol had been used and given up for argyrol. They thought they had better results from the latter drug than with either of the former. Prof. Hirst of the University of Pennsylvania was of the same opinion, while the same report came from the Maternity Hospital connected with the Massachusetts General Hospital. In Baltimore a series of comparative experiments was instituted by the resident physician of the lying-in department of the Maryland University Hospital. A 1 per cent. solution of nitrate of silver was used with all infants born in the outpatient department, while a 40 per cent. solution of argyrol was employed in the indoor clinic. Though the conditions in the outpatient department were worse the result showed a smaller percentage of cases of ophthalmia neonatorum when the nitrate was used. The difference was less than 0.5 per cent. with nitrate, about 2 per cent. with argyrol; protargol was not employed.

Dr. Woods' results with argyrol in the established disease have been excellent. There is one point in the use of argyrol which makes it specially good. We can use it freely as soon as the diagnosis is made, without waiting for the thick discharge which is usually regarded as the sign for employing the nitrate. He has seen cases of gonorrheal ophthalmia in the adult, in which the gonococci were found, but which did not present the local symptoms thought to call for the nitrate. On the contrary, there was only a scant mucopurulent discharge. These cases yield promptly to the free use of argyrol.

As regards cold applications, their special efficacy seems to him to be affording comfort to the patient. Dr. Standish published in the Proceedings of this Section in 1904 some experiments with cold. The temperature was taken between the lids in cases in which cold was used and in those patients treated without cold. The reduction in temperature was about a degree and a half, and in no instance was temperature reduced below the point apt to inhibit the growth of gonococci. Nor did patients on whom cold was used seem to recover more promptly or more safely than those treated without this agent. The patient, however, is often relieved.

DR. A. E. PRINCE, Springfield, Ill., said that, some years ago, a child had an extensive slough down to the membrane of Descemet, which membrane was bulging in both eyes. The danger of perforation was so great that he gave the child chloroform, and applied a strong solution of silver nitrate to the inverted lids and fornices. The profuse suppuration was at once checked. Notwithstanding the precaution of administering an anesthetic, one eye ruptured and was lost. The other preserved useful vision. This emergency led him to treat all his cases of gonococcus infection with strong solution of silver nitrate. He uses 10 per cent. One end of a cotton tipped applictor is inverted into the silver solution, and the other into a salt solution with which to neutralize the silver as soon as the characteristic appearance of the action of the silver is apparent. Other treatment is not neglected. The results are so prompt that he feels that this remedy is a means of controlling this disease, and establishing a healing tendency, which revokes the action of a sloughing cornea. The theory of the use of the strong solution is based on the belief that feeble solutions do not destroy the germs which are in the epithelial cells. A feeble solution is neutralized by the salt in the tears, and the albumin in the pus and mucus, leaving little available germicide. With the strong solution, the superficial epithelial cells are cast off, carrying the germs with them.

DR. E. C. ELLETT, Memphis, Tenn., said that he was in favor of what Dr. Bruns had called the submersion treatment with argyrol. His experience, while limited, substantiates all the claims made. A little girl, five years old, had gonorrheal ophthalmia of both eyes of about three days' standing, and ulceration of one cornea. He employed two trained nurses, one for day and one for night, and used a 50 per cent. argyrol solution every fifteen minutes, and no other treatment. The discharge was very profuse when the treatment was begun; in six hours it had entirely ceased and did not recur. The ulceration of the cornea stopped. In a second case, that of a man of 26, one cornea was completely destroyed and the other extensively ulcerated at the periphery when he came under observation. This patient was seen when argyrol was first introduced, and Dr. Ellett would have preferred using silver nitrate except for fear that the cornea of the man's only eye would be ruptured in everting the lid. The argyrol, used hourly, arrested the corneal process completely and promptly. Before such practical results as these he thinks our theoretical considerations and laboratory findings will have to take a back seat.

DR. P. R. WOOD, Marshalltown, Iowa, said that he favors the weaker solutions and does not believe in the stronger ones. They are used with evident risk, and in his experience have not been so successful. He also uses dionin with very good results when the integrity of the cornea is threatened.

DR. L. H. TAYLOR, Wilkes-Barre, Pa., said that he believes in the use of the strong solution, provided the physician makes the application. He called attention to one treatment which he saw used by Prof. Leber a few years ago, and which he has used himself in the treatment of gonorrheal ophthalmia of adults, and that is the use of irrigation with potassium permanganate, a treatment which is very much used for gonorrhea. Leber uses it with a small glass tube in the shape of an inverted funnel, which is placed between the lids so that the irrigation reaches all parts of the eye. It was first proposed by Kalt of Paris.

DR. MARK D. STEVENSON, Akron, Ohio, said that he indorses the method of irrigating the eye by means of cotton pledgets dipped in a slightly antiseptic solution. He places his chief confidence in silver nitrate, making direct daily applications of 1 to 2 per cent. When there is much discharge, he sometimes has the nurse instil a weak 1/10 of 1 per cent. solution every few hours. There need be no fear of argyrosis if this is not continued too long, and slight argyrosis is of little importance as compared with ulceration and loss of the eye. The weak silver solutions, after the outer pellicle of epithelium has been removed by the application of strong solutions, penetrate the deeper tissues more easily. Usually, however, he has the nurse instil protargol between the treatments with silver nitrate. For a long time he has had no confidence in the efficacy of argyrol. A room or part of a room should be set aside for treatment, and at the first visit the following points should be insisted on by the oculist: 1. There should always be two attendants; one person, even the surgeon himself, can not safely treat infants suffering from this condition. 2. On a small table should be placed the following: A pint or quart bottle of the cleansing solution, e. g., 1 to 10,000 or 15,000 bichlorid of mercury or boric acid; a saucer, boiled for ten minutes before each treatment, containing a small quantity of fresh solution, in which cotton pledgets are placed; a plate on which to throw the soiled pledgets of cotton; a towel containing a small roll of cotton, with boiled toothpicks, also an eye dropper and a 10 or 15 per cent. protargol solution for instillation by attendants; a dark bottle wrapped in a towel with boiled toothpicks for the physician's use, and containing 1 or 2 per cent. silver nitrate solution; a tin tube of 1 to 3,000 bichlorid of mercury ointment. Very rarely, when the attendants have been shown how to use it properly, a lid elevator might also be kept on the table.

Instead of Buller's shield to prevent infection of the other eye, after cleansing and attempting to disinfect it, Dr. Stevenson places a large piece of mica, which can be obtained from any stove, properly rimmed with adhesive plaster over the unaffected eye. The portion across the nose and forehead should be tightly fastened to the face by adhesive plaster, the outer and lower borders, if the shield is large enough, may be left free, as no infectious matter can gain entrance from these directions. The material for this shield can be easily found and can be made larger than the ordinary watch glass shield and is not easily broken. It is very important to prevent the lids from gumming together and thus damming the secretion within the eye lids, endangering the cornea. This can be easily prevented by applying any ointment; e. g., bichlorid of mercury, 1 to 3,000, along the margins of the lower lids, which can be easily everted by the downward pressure of the finger on the cheek. The ointment is applied by means of a little cotton on the end of a toothpick. It is not introduced into the conjunctival sac and does not even approach the cornea. The cotton spreads it much more effectually than a glass rod and with no danger, if the nurse is shown how to use it. The ointment also prevents irritation and eczema of the adjacent skin.

To prevent infection of the mother's breasts the mouth and face of the child should be cleaned before nursing and a clean bandage applied to the eyes during the time of nursing.

DR. EDWARD JACKSON, Denver, said that, with reference to cold applications, he thinks it possible in some cases, in the adult, to keep the temperature of the cornea down to where it will decidedly inhibit the growth of the gonococcus. Probably in advanced cases and in the new-born it is never possible to make much impression on the temperature of the cornea. In all cases that he has observed closely, corneal ulceration was first apparent at the margin of the cornea, where it was covered by chemotic conjunctiva. Even in eyes in which the cornea seemed to melt down throughout its whole extent, the first loss of substance was apparent at the margin. That process has seemed to be entirely checked in some cases, without any other change in the treatment, by excision of the overhanging fold of conjunctiva. It allows that portion of the cornea to be exposed, renders the removal of the discharge easier and gives continuous drainage of blood and serum onto the ulcer.

He still believes that the nitrate of silver can not be safely omitted, but it should not be used more than once in 24 hours; often the interval should be 48 hours. It should be thor-

oughly applied in such strength as necessary—from 2 to 10 per cent. In regard to the other so-called antiseptics, he is not satisfied that with any chemical antiseptic that works in test tubes we can effectively destroy the germs of an infective disease of the conjunctiva. What our applications do, whether proved to be chemical antiseptics or not, is to favor the formation or the bringing to the affected parts of those protective bodies that are normally found in the body. From that point of view it becomes easy to understand why solutions that are proved to have little or no value as germicides may still be effective in checking the course of purulent ophthalmia.

DR. LEARTUS CONNOR, Detroit, said that his first experience with argyrol was in the case of a physician who became infected accidentally, the disease being well advanced before he applied for relief. Microscopic examination of the secretion disclosed an abundance of gonococci. The physician was given a saturated solution of argyrol to use every half hour after cleansing the eyes. On the second day the number of germs was decidedly less and by the sixth day the patient was absolutely well. One of his household, in meddling with his office, became infected and the same process was repeated, with the same result. As these results were better than Dr. Connor had previously obtained in such cases he was ready to use the remedy again and thus far has not been disappointed. In the children's hospital he generally has three nurses and day and night keeps the eyes perfectly clean with boracic acid or other solution and they get well. He thinks argyrol hastens the recovery. He said that the local use of hot water promotes the active changes for repair of the eye lesions. Granted that it may increase the growth of the germs, he believes that the power of resistance is also vastly increased, and from clinical experience he is of the opinion that hot water applications greatly increase this power of resistance without harm. It can not be insisted on too much that any mechanical injury to the cornea is to be carefully avoided.

DR. C. H. WILLIAMS, Boston, said that, no matter what chemical application is used, the greatest emphasis should be laid on the value of cleansing irrigations. He uses a fountain syringe and irrigates with from a half to one pint of fluid at about the temperature of the eye, and he thinks the best agent is a saturated solution of boracic acid. It should be employed every half hour or hour, with a little fine glass tip smoothly rounded, inserted between the edges of the lid so as to wash away the secretions thoroughly. If this is thoroughly done it doesn't make much difference which chemical application is applied.

DR. OSCAR WILKINSON, Washington, D. C., said that argyrol has not, as a rule, been used in sufficiently strong solution. He believes that the stronger the solution and the more frequently it is used the more effective it will be. While an ardent advocate of the use of argyrol, he, however, thinks there are cases in which the use of nitrate of silver will materially hasten recovery. If the solution of argyrol stands long it becomes irritating; it should be made up fresh every two or three days. He thinks that cold applications have no place except in the incipiency of the disease and then their chief use is to promote the comfort of the patient. Dr. Wilkinson believes cold is contraindicated in the second stage of the disease.

DR. GEORGE H. PRICE, Nashville, Tenn., said that the only objection to silver nitrate is that it can be used but once in twenty-four hours with any decided effect. One does not wish to use it oftener nor until the coagulum has been removed. If this is removed by wiping with saline solution, the effect of the nitrate is destroyed. But, after using the nitrate and then removing the coagulum by saline application, protargol, used immediately, will penetrate deeply into the tissue and destroy the gonococci. The nitrate will not penetrate deeply, but protargol and argyrol will, although protargol is a little painful.

One must keep up continuous cleansing of the eye; but irrigating alone will not accomplish the desired end. Dr. Price said that he did not object to the use of the very strong nitrate solution, as suggested by Dr. Prince, but he asked how many ophthalmologists could chloroform patients personally and see that the treatment is carried out in this way. It must only be used by an experienced man. The submersion method is nothing but irrigation with argyrol. Irrigation with permanganate of potash, referred to by Dr. Taylor, has to be used with the greatest care. Dr. Price uses, therefore, as an application to be put in the hands of the patient, the little prescription suggested in the paper. Every time the eye is irrigated with the boracic acid solution or warm water, or dilute solution of mercury bichlorid, he has instilled into the eye two or three drops of this solution and then three or four times a day the protargol is used, and when he sees the patient he uses a stronger solution of the remedy.

THE CONSERVATIVE TREATMENT OF CHRONIC SUPPURATION OF THE MIDDLE-EAR.

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BALTIMORE.

As I have for many years been an advocate of conservatism in dealing with otitis media, acute as well as chronic, it was with pleasure that I accepted the invitation extended me to say something on this occasion regarding "The conservative treatment of chronic suppuration of the middle-ear." Still, I fear I shall not have much to add to what I have said heretofore on this subject.

No one will deny that a chronic suppurative process of the middle-ear, because of the dangerous complications to which it may give rise, is a matter of serious concern, and that the condition should not be permitted to continue indefinitely all will admit. The only point on which there can be a difference of opinion is as to the remedial measures that should be employed for its control.

The prevailing tendency of the day in dealing with this condition, it seems to me, is to resort too hastily to radical operative procedures without giving sufficient thought to the more conservative measures through which, as abundant experience has shown, the end in view in many instances may be attained.

Not every chronically suppurating ear, it should be borne in mind, is necessarily a useless organ, and this fact furnishes an additional argument in favor of conservative methods of treatment; for while the radical procedures just mentioned are usually effectual in putting an end to the suppurative process, they are very apt, at the same time, and as effectually, to put an end to useful hearing.

In my method of treating chronic suppurative otitis media there is little of novelty. The two points on which I would lay especial stress are, first, that the patient should not be made wholly dependent on the surgeon for the carrying out of the treatment—that he should be taught to make use, himself, of the remedies that have been found most efficacious; and, second, that in controlling the condition constitutional measures are almost, if not quite, as important as local measures.

Because the affection is a chronic one the treatment, in many instances, must likewise be chronic, and, furthermore, after an intermission of weeks or months or, perhaps, of years, it may have to be resumed. For these reasons there are obviously great advantages in making the patient measurably self-dependent. I am aware there are otologists who contend that this is im-

* Read in the Section on Laryngology and Otology of the American Medical Association, at the Fifty-eighth Annual Session, held at Atlantic City, June, 1907.

practicable—that home treatment is ineffectual is of little or no avail. I can say emphatically that this has not been my experience.

Apart from the removal of polypi, if they are present, operative procedures, unless there are evidences of mastoid implication, are, in my judgment, seldom called for in the treatment of the condition under consideration. Even the removal of granulation tissue by curettage and the scraping of tiny areas of carious bone seem to me superfluous, for the granulations quickly shrink and the exposed bone is soon covered by periosteum, when the discharge has been brought under control and the parts restored to a healthier condition by the effectual employment of a suitable antiseptic agent.

In years gone by I used, as did most others at that time, astringent and antiseptic powders in treating middle-ear suppuration. I was, however, one of the first, if I am not mistaken, to abandon this plan of treatment and to commend, instead, the employment of antiseptic solutions,[1] and this practice I have followed to the present day.

Bichlorid of mercury and boracic acid are the antiseptics that have been found of greatest value, the former being used in solutions varying in strength from 1:8000 to 1:4000, the latter in saturated solution. In chronic cases my first choice is the murcurial salt; in acute cases preference is usually given to the boracic acid solution. With whichever solution is used the ear is thoroughly syringed as often as may be found necessary to control the suppurative process. In chronic cases this is seldom oftener than once a day, even at the outset of the treatment, and in a short time it is usually found that much less frequent syringing is called for. In acute cases, if the discharge is abundant, the syringing may have to be repeated as often as three times a day, but the necessity for such assiduous attention is not apt to last more than a very few days. The cleansing of the ear is made more effectual by the use of the Politzer bag, and especially by Valsalvian inflation.

In recent years the only cases in which antiseptic powders (usually boracic acid or a mixture of boracic acid and zinc oxid, equal parts) have been employed are those in which the otorrhea is of long standing and in which there is extensive destruction of the drum head, and then only after the solutions have been tried without avail.

As the chronicity of many cases of middle-ear suppuration is due to concurrent nasal disease, and of many others to systemic disorders, it is important that these matters should receive attention. The digestive apparatus, the state of the bowels and the general health, therefore, are taken into account. When the system has seemed to need building up, a combination of iron, quinin and strychnin, particularly in the form of phosphates, has been found especially valuable, and in the treatment of nasal catarrh the systematic spraying of the nose with a 1:5000 bichlorid of mercury solution, to which sodium chlorid, gr. iij to ℥i, is added, has proved very efficacious.

That every case of chronic suppuration of the middle-ear can be cured, or even brought under control, by the employment of the conservative measures outlined is not for a moment contended, but that many such cases can be cured in this way, and that many others can be kept in a condition in which the risk of serious complications supervening is reduced to a minimum, there can be no question.

The class of cases which are least amenable to such measures, in my experience, are not those in which there is extensive destruction of the drum head, but rather those in which the membrana vibrans is intact and in which the discharge finds exit through a comparatively small perforation in the membrana flaccida.

I have spoken of the great advantage derived in the management of chronic otorrhea from the patient's being put in a position to carry out the treatment himself and to resume it from time to time should occasion require. One of the chief merits of the treatment commended is that it renders this entirely practicable, for even without assistance any one not exceptionally awkward, by means of a rubber bulb syringe, can use the bichlorid of mercury or boracic acid solution, and, if there is occasion for it, with a hand atomizer, can spray the nasal passages successfully.

As I have had occasion to say heretofore:[2] "A weekly or fortnightly syringing of the ear by the patient is no great hardship, and if it were necessary to continue it indefinitely would be but a small price to pay for the comfort and safety which it insures; but, as a matter of fact, the cases in which this is required are the exception, and the rule is that after the suppuration has been checked for a few weeks the ear remains for weeks or even months without requiring attention."

In conclusion, I may add that in my experience, even when the mastoid antrum is involved in the suppurative process, it does not follow, necessarily, that operative measures must be resorted to; for if the passageway between the antrum and the tympanum is capacious, so that efficient drainage is provided, it not infrequently happens that the antral trouble disappears when the tympanic suppuration has been brought under control. Especially in cases of this character has the administration of sodium pyrophosphate in liberal doses (gr. xx every 2 to 3 hours)—as commended in the paper just quoted—proved efficacious.

DISCUSSION.

DR. DUNBAR ROY, Atlanta, Ga., said that most of us will agree with Dr. Theobald to a certain extent. He thinks that it is a matter entirely of observation and experience as to what cases shall be conservative and what radical. He does not think that otologists see nearly so many cases of suppurative ears now as formerly, and believes this is due to the fact of early recognition of the trouble. When the mastoid is involved we do not delay, but go in and give relief. In acute cases the antrum should be opened whenever we are sure of involvement and we are always sure of this after an ear has been running for some length of time. By conservatism is meant the preservation of as much of the normal ear as possible, as much of the physiologic ear as possible, and at the same time as much hearing as possible with the healing of the pathologic process which exists. Conservatism is sometimes radical. Dr. Roy believes that in many cases the radical operation is conservative treatment, because in these cases one must take into consideration the future life of the patient, and there is no doubt that a suppurative condition of the middle ear is always a menace to the well-being and future of the individual. In reference to the treatment suggested by Dr. Theobald, he said that a distinction must be drawn between an ordinary catarrhal condition and otorrhea, when there is no pus, or very little and very little if any odor. In cases with a small catar-

1. The Employment of Boracic Acid, in Solution, in the Treatment of Otitis Media Suppurativa. Trans. Amer. Otol. Soc., 1888. The Value of Weak Solutions of Bichlorid of Mercury in the Treatment of Otitis Media Supparativa. Ibid, 1892.

2. What Means, Other than Operative, Have We for Preventing and Combating Inflammation of the Mastoid Cells? Trans. Amer. Otol. Soc., 1902, and New York Med. Jour., Sept. 13, 1902.

rhal perforation in the drum membrane Dr. Roy does not suppose that any one would consider operative procedures, because they depend on the condition of the nose and nasopharynx and readily yield to such measures as Dr. Theobald has mentioned. But in the suppurative conditions in which there is necrosed bone, and in which it is certain that the antrum is involved, the question narrows itself down to whether this treatment shall be continued or the patient be given the benefit of operative procedure. All otologists know many cases in which the ear has been suppurating, in which the odor is exceedingly offensive, in which there is exposed bone in a necrotic condition, and in which they are almost certain a radical operation ought to be done, and yet under proper conservative measures, such as cleansing and the application of certain astringents, these cases yield and a cure seems to take place. Others, again, do not show nearly the pathologic changes, but will not yield to proper conservative measures, and it is necessary to use radical measures. Consequently, Dr. Roy thinks that it depends largely on the pathologic process in the middle ear, the length of time it has existed and the symptoms it produces in the patient as to whether conservative treatment shall be continued or more radical measures instituted. He fully agrees that drainage is the main thing in the conservative treatment. He wants to get the middle ear cleansed thoroughly, free drainage from the mastoid into the middle ear and the parts kept well open. He rarely uses powders to block up the secretions, and he thinks that in certain polypoid conditions the curette will have to be used, and mild escharotics, such as chromic acid and strong solutions of nitrate of silver. It is a question of the welfare of the patient.

Special Article

TRAVEL NOTES FROM SOUTH AMERICA.

NICHOLAS SENN, M.D.
CHICAGO.

(*Continued from page 1606.*)

VIII. MEDICAL SANTIAGO DE CHILE.

My itinerary limited my time in Santiago to five days, and it was fortunate, therefore, that I met Dr. Eduardo Moore, the day after my arrival in the city. I am deeply indebted to him for his kindness and many courtesies, which enabled me to see and learn so much of Santiago's medical men and institutions in such a short time.

Santiago has about 400 practicing physicians, with few exceptions Chilean born, but many of them, after graduation from the Medical Department of the University of Santiago, have taken postgraduate courses in Europe, especially in Paris, Berlin and Vienna. As the city has less than 400,000 inhabitants, and more than half of these never expect to pay for medical services, it is not difficult to understand that the average practitioner is not overworked, and that his average annual income is very modest. As in all large South American cities, the medical profession is badly overcrowded. Among the German physicians who received their education in Europe are the following: Dr. Victor Korner, professor of gynecology in the medical college; Dr. Felix Grohnert, physician; Dr. David Plant, oculist, and Dr. Brockmann, physician. The best and most popular physicians are paid from 10 to 20 pesos ($2.50 to $5) for office consultations and visits in the city. Physicians in country towns make visits for 2 pesos ($.50). Fifty dollars in gold is considered a good fee for any of the capital operations. Very few of the physicians in the city have an income of $10,000 a year.

MEDICAL SOCIETIES.

Medical societies do not flourish on Chilean soil, and the majority of physicians, after they have entered practice, take little interest in the progress of medicine and spend little of their time and money in attending medical societies. Chile has only one medical society, the "Sociedad Médica," a national organization, which meets annually. The membership of this society is small and the interest shown in its meetings is not what it should be. The *Revista Médica*, the official organ of the medical society, is the only medical journal published in Chile.

ACADEMY OF MEDICINE.

Santiago has an Academy of Medicine (Academia de Medicina), which was founded a few years ago by Dr. Moore and a few of his most intimate colleagues. The membership is limited to fifteen, and the meetings are held monthly, in rotation, at the homes of the members, where dinner is served, cases are presented and medical subjects are discussed informally, but no papers are read. The social features of this very exclusive society are the chief attraction of its meetings, and the financial interests of its members are not lost sight of. Professors Moore and Benavente and Dr. Frederico Prega, minister of the foreign office, are the leading spirits in this select medical circle. Dr. Eduardo Moore spent four years after his graduation in the laboratories and clinics in Berlin and Vienna. He speaks German, English and French fluently, and is beyond all doubt the ablest and most progressive surgeon in Chile. He is professor of diseases of the skin and genitourinary organs in the medical college; attending surgeon to two of the hospitals, and the founder of the first training school for nurses in South America. He was formerly connected with the army, and is the author of a small handbook on military surgery. He is an intimate friend of President Montt and his family physician. (Fig. 36). I imagine that as a leader of men he would wield a powerful influence in political affairs should an emergency present itself. He is a hard worker and fully abreast of the newest and best in the specialties which he teaches and practices. His Anglo-Saxon blood accounts for his energy, although born and reared in a land of perennial ease and inordinate love for amusements.

THE MEDICAL COLLEGE.

The Medical College of Santiago is the Medical Department of the University of Santiago (Fig. 37). All the professors of the university receive a beggarly salary, which hardly suffices to keep body and soul together. The salary of the professors of the medical school, less than $10 in gold a month, barely covers the expenses for carriage hire. On the other hand, students pay only $2.50 for their seven years of instruction and the expenses of printing their graduation theses. These figures are enough to show why the University of Santiago has gained so little reputation, and why all the professions have suffered from one common cause—overcrowding.

The medical course comprises seven years, and students must present credentials showing that they are high-school or gymnasium graduates as a condition for their entrance. The number of students has gradually diminished in recent years, and at present does not exceed 150, among them being 12 women. There are only a very few women physicians in Chile, and I was told that the public has not much faith in their medical skill, and that even the women in case of illness prefer to be attended by the sterner sex.

The medical college (Fig. 38) is an imposing building, the architecture being in the Greek style. In front of the college is a beautiful flower garden, artistically laid out and well kept, and shaded by towering evergreen trees. The walks are in graceful curves, bordered by low shrubs. At the entrance of the building are six fluted columns, which impart dignity and beauty to the building. The lecture-rooms and laboratories are in one-story wings, arranged around a central court with an inside gallery extending all around the building, from which the different departments are entered. The library I found in bad order; books covered with dust were lying on the tables or scattered on the floor. The dissecting room was the vilest I have ever seen. About a dozen decomposed bodies were on the marble slabs in process of dissection, and the effluvium from them was enough to stifle even a veteran who had become habituated to such foul places. The lecture room for anatomy deserves much praise, as it is well supplied with material for illustration, including blackboards, skeletons, piles of single bones, charts, models, etc., within easy reach of the teacher, and a constant object lesson for the students.

HOSPITALS OF SANTIAGO.

The available hospital space for Santiago, considering the size of the city, is something enormous, as is shown by the following figures:

Name of Hospital.	No. of Beds.
Hospital San Vicente de Pablo	400
San Juan de Dios	600
San Salvador	700
San Borjas	800
Two children's hospitals	1,000
Total	3,500

As only a few of these hospitals have accommodations for paying patients, these figures prove to what extent the charitably disposed people are taxed by the sick poor, who outnumber by far the patients who can pay for medical service.

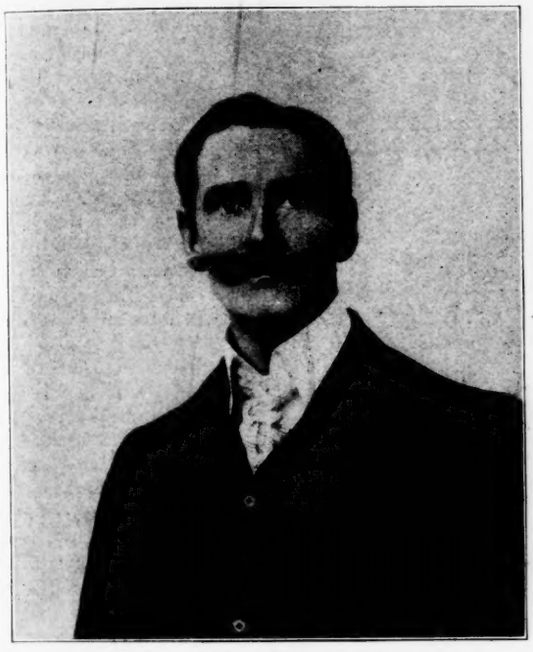


Fig. 35.—Dr. Eduardo Moore, of Santiago, Chile.

These figures also show how much valuable clinical material remains unutilized, as most of the clinical teaching is done in St. Vincent's Hospital.

SAN VICENTE DE PABLO HOSPITAL.

This is the clinical hospital for the medical college, to which it is adjacent, and the medical staff is composed exclusively of the clinical professors. It was built in 1873, and has accommodation for 400 patients. The hospital is a small city in itself, with a network of open verdant courts, separating the numerous one-story brick and cement pavilions, all under tile roofs. All the buildings are connected by inside galleries, which are faced by all the entrances to the wards, private rooms, pharmacy, etc. The complexity of these buildings, courts and galleries is well calculated to bewilder the visitor and to make him feel the need of a guide to find his way out. The wards are large and plainly furnished, but are kept scrupulously clean under the management of fifty Sisters of Charity of St. Vincent de Paul, who manage the institutions and take care of the sick with the aid of an adequate number of male and female helpers.

The benches in the surgical amphitheater are made of cement. No antiseptics are used in this clinic, and rubber gloves or rubber finger tips are used only in examining or operating on septic cases. Chloroform is used as a general anesthetic and is administered by the employment of Ricard's inhaler, manufactured by Collin of Paris. The surgeons here are enthusiastic in their praise of this apparatus.

The pharmacy is an immense establishment managed by the Sisters, who have not lost their faith in large jars and bottles as receptacles for medicines, plasters and ointments for the cure of disease and the mending of injuries.

Dr. Moore has charge of the skin and genitourinary department. Although this department has only recently been organized, everything is conducted with German accuracy and thoroughness. We were given opportunity to see a number of exceedingly interesting cases of genitourinary surgery. Vesical and renal calculi are of frequent occurrence. The favorite method of treating stone in the bladder is by crushing, or if this operation is contraindicated, by suprapubic lithotomy. Hypertrophy of the prostate gland and its immediate and remote complications are more rare than with us. It has been my uniform observation that hypertrophy of the prostate gland is rarely encountered in the tropics, and that this disease of old age in men increases in frequency as we approach the temperate zones.

The general clinics in the hospital are conducted by two professors of medicine, while all the specialties are represented by one clinical teacher. Senior students from the graduating class act as assistants, and one chief of clinic supervises the preparations for the different clinical teachers.

SAN BORJAS HOSPITAL.

This is a hospital devoted entirely to the care and treatment of sick women. It has 800 beds. The physicians who attend this institution receive 30 pesos ($7.50) a month for their services. The hospital consists of a large number of one-story pavilions, with connecting inside galleries arranged around many open courts, which are so many garden spots to give this immense establishment a general, homelike appearance. Fifty Sisters of Charity of St. Vincent de Paul, assisted by a corps of untrained nurses, take care of the sick. Dr. Moore has charge of the department for skin and venereal diseases. For four years he has advocated and practiced the treatment

Fig. 36.—President Montt of Chile.

of syphilis by the employment of serum obtained from virulent cases of this disease. The serum used is obtained by blistering the skin with cantharides. The serum is then withdrawn from the blister under strict aseptic precautions and is injected subcutaneously, beginning with two-grain doses every third day, and gradually increasing the dose to ten grains. He showed me some striking results of this treatment in cases in which no medicines of any kind were used, an experience which certainly speaks for itself and which should encourage others to give it a fair trial, as the theory and practice appear to be based on a rational foundation.

TRAINING SCHOOL FOR FEMALE NURSES.

I have heretofore made mention repeatedly of the deplorable lack of trained nurses in South America as the greatest drawback to proper hospital treatment, and as the greatest difficulty physicians and surgeons have to contend with in their daily work inside and outside of the hospitals. Dr. Moore was the first physician to recognize to the fullest extent this lamentable absence of trained nurses, and had the courage, under the greatest difficulties, to organize a training school. The Sisters of Charity of St. Vincent de Paul are in charge of nearly all of the hospitals. Hospital work has been their principal vocation ever since the order was founded by St. Vincent de Paul. They are a faithful devoted band of women, who are sent out from the mother house in the Rue de Bac, Paris, on their errands of mercy and charity over a large part of the inhabited world. They have served on battlefields, in all climates, regardless of the faith of the contending armies; they have for centuries exercised their deeds of charity in times of devastating epidemics; they have taken care of helpless infants and orphans thrown on the mercy of the world; they have nursed the aged, and fed and clothed the poor, and their sweet voices have comforted the last hours of the dying. They are the oldest, most reliable and most devoted and useful sisterhood in the Catholic Church. The order, as a whole, has not yet recognized to the fullest extent the necessity of scientific, skilled nursing. Their services as nurses were satisfactory before medicine and surgery attained the exactitude and degree of perfection of the present day. The sisters of this order in the United States awakened several years ago to the necessity of a thorough training as nurses, and almost every one of their many hospitals has now a well-organized training school for lay nurses. The St. Joseph's Hospital of Chicago, with which I have the honor to be connected as surgeon-in-chief, took the lead in this great reform. After the sisters had been trained in the science and art of nursing, the training school was organized and chartered, and has now 57 pupils, with a sister in charge, and much of the training and teaching is now being done by the sisters. In France and in the Latin countries, where so many of these sisters are engaged in hospital work, nothing has been done so far in this direction, to the great detriment of the hospitals, the sick, and the progress of scientific medicine and surgery. The time must come, and I hope it is near at hand, when this excellent order of sisters will be at the head of the movement to supply the sick and injured with trained female nurses in every land in which the cornet is worn.

Fig. 37.—University of Santiago.

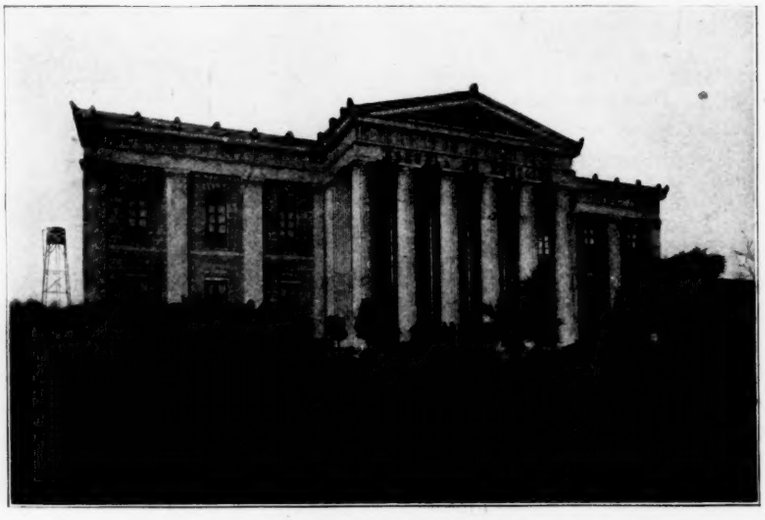


Fig. 38.—Medical School, Santiago.

Dr. Moore organized his training school (*Escuela de Enfermeras de Santiago*) two years ago in connection with his department in the San Borjas Hospital. The faculty is composed of twelve physicians, with Dr. Moore as director. It is now attended by forty-five pupils, all young, intelligent looking women between 20 and 30 years of age. The pupils live at their homes and come to the hospital daily to attend the lectures and receive the necessary practical training. They wear a neat, modest garb, and the teachers speak in the highest terms of their diligence, punctuality and good behavior. The course of training comprises three years, and in a year from now Dr. Moore will have the great satisfaction of handing diplomas to the first class of trained nurses in South America.

The nurses pay no fees, as all the teaching is done gratuitously, and the hospital provides a room, free of expense, in which the lectures are given. The class is divided into groups of five, with one of the pupils at the head, who looks after the punctuality and good behavior of her squad. It was my pleasure to meet the class while the teacher of obstetrics was delivering a lecture. I looked through some of their notebooks and was pleased with the excellent handwriting and some very creditable pen-and-ink drawings. Let us hope that this school will become a seed, which will bear a rich harvest, and which, by its example and good results, will eventually reform the nursing of the sick in every South American hospital, as well as in private practice.

CHILEAN DISEASES.

With the exception of abscess of the liver as a remote complication of dysentery, there are no tropical diseases in Chile. Leprosy and elephantiasis are almost unknown. The impurity of the water supply is responsible for the frequency of typhoid in Santiago throughout the year. The moisture of the air and the sudden changes in temperature explain the prevalence of catarrhal affections of the air passages and rheumatism. As in all large South American cities, tuberculosis figures prominently in the hospital reports and mortuary statistics. The physicians of Santiago and other Chilean cities have never seen cancer or appendicitis in the Aborigines. The greatest enemies of the natives are smallpox, tuberculosis, venereal diseases and alcohol.

In preparing this report on medical Santiago, I have been a

great disadvantage, because none of the hospitals issues a printed annual report, and I did not succeed in obtaining a printed copy of the schedule of lectures and clinics of the medical college. The total absence of such printed publications is only another evidence of the present poverty-stricken condition of the seaside republic of South America.

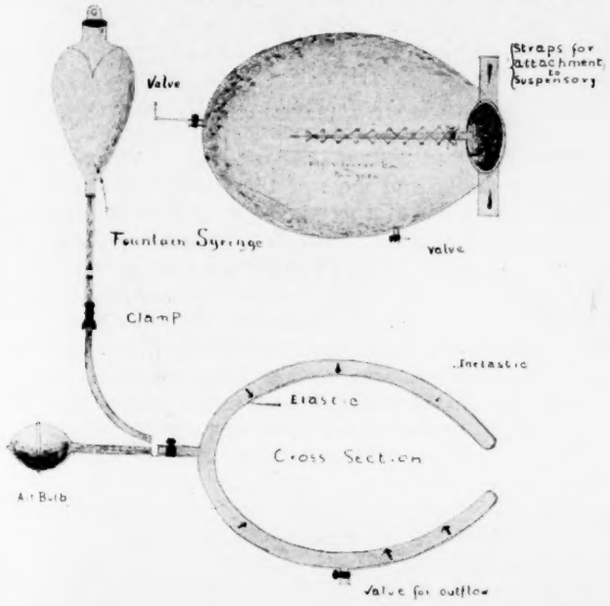
SANTIAGO DE CHILE, August 25.

Clinical Notes

PNEUMATIC SCROTAL COMPRESSOR FOR USE IN EPIDIDYMITIS.

EDGAR BALLENGER, M.D.
Lecturer on Genito-Urinary Diseases, Atlanta School of Medicine.
ATLANTA, GA.

Generally speaking, the chief factors desired in the routine treatment of epididymitis are rest, cold or heat, compression, and suspension. The value of compression, especially in the latter part of the disease, is admitted by the best authorities and is attested by the various methods that have been advocated with this purpose in view, such as strapping with adhesive plaster, the application of thin rubber bandages and the use of a large number of suspensories.



Scrotal compressor showing attachments for either hydraulic or pneumatic pressure.

An attempt to utilize any one of these plans of treatment will readily demonstrate their serious disadvantages. Strapping with adhesive plaster works well for the first twenty-four hours until the swelling has yielded to the compression, then no further benefit can be obtained without reapplying it. The manipulation and handling required for this procedure usually causes sufficient irritation to counteract the good effect of the compression. The plaster also frequently irritates the skin. So much skill and judgment is necessary in order to bandage the swollen part with thin rubber that the average practitioner finds it very unsatisfactory. It is either applied so loosely that it will not hold and no benefit is obtained, or it is too tight and has to be removed to relieve the pain. The suspensories on the market are still more unsatisfactory as they do not furnish uniform pressure.

I have devised a pneumatic compressor which is simple, easily applied and effective in maintaining uniform compression of any degree, and I think it is the most satisfactory method so far advocated for the treatment of epididymitis. It is composed of two layers of rubber, the outer one is inelastic while the inner is elastic. The space between them is to be inflated with air after the compress has been applied and laced around the swollen part.

The pressure can be accurately regulated by gradually forcing the air in or allowing it to escape. As the swelling subsides more air should be injected to maintain the desired pressure. A commendable feature is that this can be done without any manipulation to aggravate the condition. A light gauze stocking should be placed under the compress to absorb the perspiration. By using this method of treatment patients can be gotten out of bed more promptly and with little danger of a relapse.

Local medication in the form of guaiacol in from 10 to 30 per cent. solution in glycerin or tincture of iodin painted on the swollen part once or twice daily may be used in conjunction with the compression. These I have found to be the most useful local remedies.

The larger size compressors are supplied with an exit valve for drainage, and instead of using an ice bag in the beginning of the disease a fountain syringe containing ice water (or hot water if preferred) may be connected to furnish hydraulic pressure in the place of air. By regulating the height of the bag and the rate of outflow both compression and cold can be adjusted to suit the comfort of the patient and the lessened swelling. It is well known that the benefit of an ice bag can be augmented by pressure to force some of the blood out of the tissues and prevent the too rapid dissipation of the cold.

The compresses are manufactured in several sizes, and the smallest one that can be used with comfort should be selected and snugly laced before being inflated. They are attached by straps and held in place as an ordinary suspensory to prevent any tension on the cord. Their simplicity, with the admitted value of uniform pressure which can be maintained and easily regulated or combined with cold or heat, make unnecessary any further exposition of the advantages to be derived from this plan of treatment.

1014 Century Building.

THE HOSPITAL ARRANGEMENTS OF A MAN-OF-WAR.

ROBERT A. BACHMANN, M.D.
Passed Assistant Surgeon, U. S. N.; Senior Medical Officer, U. S. S. *St. Louis*.

There was a time when the only place devoted to the sick in a man-of-war was a small, dark, stuffy place situated on one of the lower decks, usually forward in the very bow. In a way these sick quarters were commensurate with the demands of the profession at that time. There was little antisepsis and no asepsis in surgical work, laboratory methods were confined to small limits and the dispensary was not called on for the variety of medication as at present.

The importance of a well-equipped medical department on board of a man-of-war, too, was less apparent and the value of hygiene in war not known. So long did these inferior conditions exist that even now the impression prevails in many minds that on board a man-of-war little or no improvement has taken place; at least I

doubt if the modern, greatly improved hospital arrangements are as well known as they deserve to be.

The U. S. S. *St. Louis,* while not an example of our largest class of war vessels—the battle ships—being rated as a protected cruiser, having less tonnage than the former, by from 2,000 to 6,000 tons, and greater speed, still is a fine type of ship for the purpose of this article. Its length is 426 feet, extreme beam 66 feet and displacement 9,700 tons.

In order to afford the greatest safety to the sick the sick quarters on men-of-war are usually located on one of the lower decks behind armor or coal bunker protection. On the *St. Louis* the sick bay is situated on the berth deck forward, but as the ship is not armored, enjoys no greater immunity to shell fire than any other part of the ship. In close connection on the same deck are the operating room and the dispensary. Farther forward is the isolation ward.

The sick bay (Fig. 1) is a large and well-lighted room containing twenty-four folding bunks arranged in pairs one above the other. The air contents are sufficient to allow about 220 cubic feet per bed. Four large supply louvres (air shafts) furnish a steady influx of fresh air, and are constructed so that the current may be directed to any part of the ward.

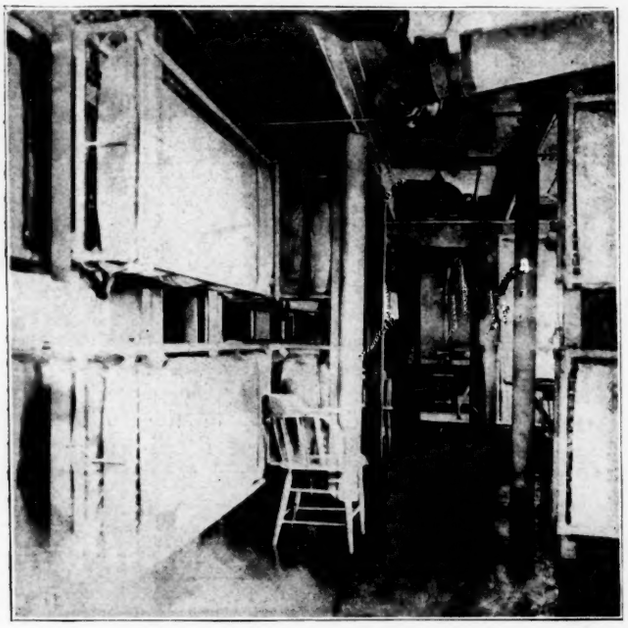


Fig. 1.—Sick-bay looking into operating room.

Electric fans, port holes, etc., furnish additional aids to the ventilation. The deck of the ward is covered with thick linoleum, which is shellacked at regular intervals, making it a smooth waterproof surface easily kept disinfected, and comparatively noiseless to the tread. A bath room with mosaic tiled floor, porcelain tub, shower and modern sanitary fittings adjoins the sick bay. In all the washstands of the ward, toilet rooms, operating room and dispensary nothing but distilled water flows through the pipes. Part of the space has been utilized as a dressing stat n, where minor surgery is done and the various dressi gs attended to.

The operating room (Fig. 2) is directly across fr m the sick bay, a small passage extending between them, and the two take up the entire width of the ship—about 50 feet at this point. It is equipped with an enamel operating table and electric reflector for night operations, instrument cabinet, autoclave, small steam sterilizer for instruments, basin stands, dressing rack, etc.

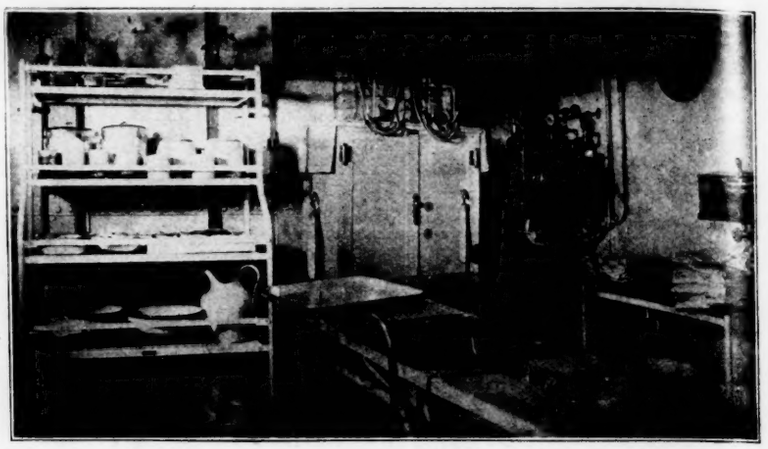


Fig. 2.—A view of a portion of the operating room.

The supply of instruments is amply sufficient for all the usual major and most of the special regional operations. The sides of the room are of steel covered with white enamel paint and the floor is mosaic tiling.

The dispensary (Fig. 3) is located just forward of the operating room, to which it is nearly equal in size, and part of it is arranged for laboratory work. A microscope with mechanical stage, the most frequently used stains, sterile typhoid cultures, a Zeiss hemacytometer, centrifuge, Talquist's hemoglobinometer, etc., and a chemical case containing ureometer, albuminometer, Erlenmeyer flasks, burettes, pipettes, tubing, fermentation tubes, Petri dishes, graduated cylinders, etc.; in short, all apparatus and chemicals the medical officer might require for a bacteriologic or chemical diagnosis are supplied.

The isolation ward, still farther forward, is a small compartment, entirely closed in and containing four folding bunks. The deck is of mosaic tiling and the sides enameled steel. It is devoid of all furniture save

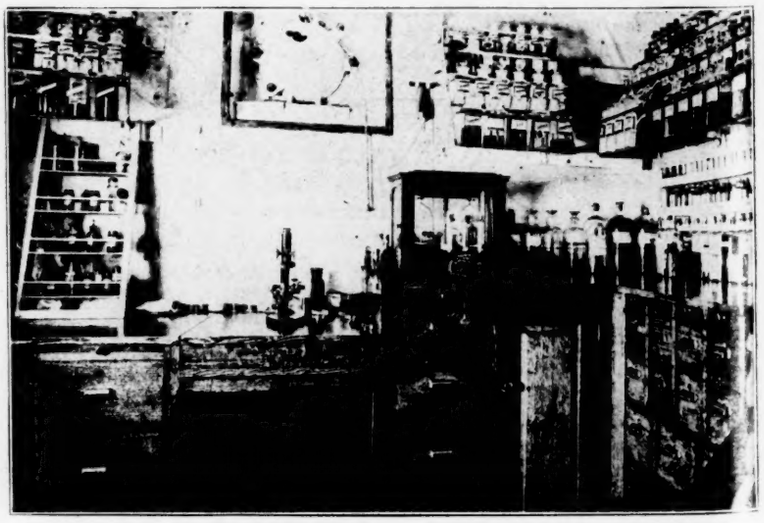


Fig. 3.—Dispensary and laboratory.

e metal bunks, and can be rapidly disinfected by her fumigation or solutions. The air supply here is irely from leakage and one port hole, facilitated by exhaust blower which evacuates the air and conducts to the exterior at the stern of the ship.

On the superstructure of the ship a tent (Fig. 4) can e pitched for additional cases in case of an epidemic nd at other times used for phthisis and pneumonia ases.

There are aboard about 650 men including the

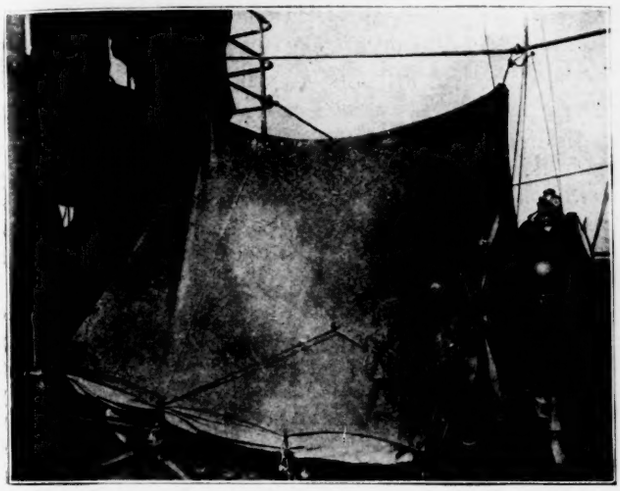


Fig. 4.—Tent for the treatment of tuberculosis and pneumonia, located on the after bridge.

officers. For this complement there are one hospital steward, two hospital apprentices, first class, and one hospital apprentice (Fig. 5).

Hospital stewards are usually graduates of a college of pharmacy or have equivalent experience; hospital apprentices, first class, are graduates of a naval training school in most cases and have passed an examination for the grade. The hospital apprentices are recruited from civil life and need merely possess a general education. Besides having a knowledge of their profession,

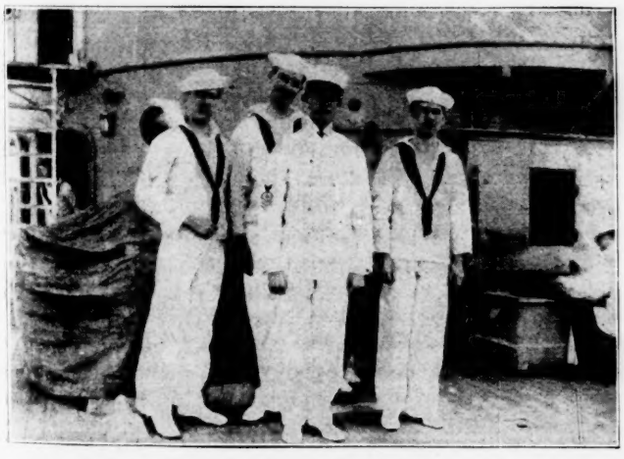


Fig. 5.—Trained hospital corps.

these men are drilled in the special requirements of a military organization.

In this connection it might be well to add that no little part of the medical officer's time and attention are given to working out preparations for conditions in the result of actual warfare. First aid instruction is given to every man on the ship. To some showing adaptability more advanced training is allowed for the purpose of using them in time of battle as assistants to the regular hospital force.

Drills are held aboard ship simulating actual battle, and at these times the medical corps assumes positions at relief and dressing stations, established with a view to prompt and systematic aid to the wounded of the crew in mind, and makes all the preparations that would be necessitated by a real engagement.

It has taken some years and much labor in the face of difficulties to bring the medical department of a ship to its present state. Confronted by the problems of crowding a great deal into a small space, arranging rooms to conform best with the architecture of a ship, allowing for a wide range of climatic conditions, beset with questions of ventilation, unusual ship motion and distance from a supply source, the results have been very satisfactory and the benefit to the naval personnel marked.

AN IMPROVISED REFLECTOR FOR THROAT EXAMINATION.

J. HARVIE DEW, M.D.
NEW YORK CITY.

I have used the following simple device for a number of years in making examinations of the throat:

Showing method of using an improvised reflector in throat examinations.

It will prove of exceeding value whenever it is difficult to secure satisfactory light.

The idea was not original with myself nor was it obtained from any professional sources.

A candle, a tablespoon and another spoon suitable for depressing the tongue are the several essentials needed. The accompanying cut illustrates the procedure.

Hold the candle between the middle and ring fingers and the fore and little fingers of the left hand; then place the tablespoon between the thumb and fore and little fingers of the same hand. The concave bowl of the spoon should be placed immediately in rear of the flame. In this way a bright light can be thrown on any desired point.

Eczema of Extremities.—N. E. Aronstam, in *Medical Fortnightly*, says that, in acute erythematous eczema of the extremities, in which the subjective symptoms are very pronounced and annoying, the application of a dilute solution of the adrenal principle to the lesions will produce a rapid blanching of the parts and ameliorate the intolerable itching. After the acute features of this dermatosis have subsided an ordinary Lassar's paste with or without ichthyol wherein a small amount of adrenalin solution has been incorporated, will hasten the restitution of the involved areas to normal.

REMOVAL OF STRANGULATED SPLEEN IN A CHILD.

W. L. WALLACE, M.D.
Surgeon to Good Shepherd Hospital.
SYRACUSE, N. Y.

The spleen is hung so loosely in the upper part of the abdomen that it seems strange that it is not more often dislocated. At an autopsy or an operation it is generally possible to pass the hand through a median incision and, grasping the pedicle as a handle, easily draw the spleen outside of the body.

The spleen is often enlarged, as in acute fevers and infections; or in chronic diseases, as malaria, leukemia, anemia, cirrhosis of the liver, heart disease, and in tumors or tuberculosis of the spleen itself. These enlarged spleens seldom get out of position, showing that abnormal size is not usually the cause of displacement. Ordinarily the spleen stays in position, moved up and down by the diaphragm, and pushed back and forth by the stomach, but remaining in the upper left-hand corner of the abdomen, resting on the splenic flexure of the colon, its pedicle being very short, just long enough to be surrounded by the grasping finger and thumb. Occasionally, however, the pedicle is elongated and the supports broken over and the spleen found in the lower part of the abdomen, even in the pelvis.

A movable spleen may do no harm and may need no treatment except a supporting bandage. However, if rotation occurs with a strangulation of the vessels in the pedicle a surgical operation may be urgently required, and even splenectomy may be necessary, as necrosis in such cases is rapid.

The following case is interesting, especially on account of the youth of the patient, as Treves states that a movable or floating spleen is met with only in adults.

History.—Mary R., aged 12, was seen with Dr. Graves of Delphi, Sunday, Oct. 21, 1906. Child had complained of pain on Friday night, October 19, and did not sleep; felt ill the following morning. On Saturday she vomited and had constant pain and soreness. When seen on Sunday she complained of pain in the left side of the abdomen, low down, intermittent in character, worse on moving. Her bowels had previously been normal, but enemata given that day were not satisfactory. She had had one or two previous attacks, but never severe. She had had no chill and had never menstruated.

Examination.—When examined at 4 p. m. Sunday, her temperature was 99 F. and pulse 120. A mass could be felt filling the lower left abdomen as high as the navel and passing beyond the middle line; it was distinct, flat and tender to the touch. Right side of the abdomen was not rigid and not very tender. On account of the history of previous occasional attacks and the fact that the child had never menstruated, I suspected an imperforate hymen, with an accumulation of blood in the vagina, uterus and tubes. Rectal examination, however, showed that there was no bulging, as of a distended vagina, and the hymen was not imperforate. A mass could be felt high up above the examining finger. The case then seemed certainly a strangulated ovarian tumor, and this was my diagnosis.

Operation.—Dr. Graves gave chloroform and I made a small opening in the abdomen above the pubes, and found a large mass attached above and not below, therefore not ovarian, and easily identified as the spleen. I enlarged the opening and delivered the tumor through the cut below the navel. The spleen was dark, almost black, attached by a pedicle six inches long, twisted tightly through an arc of 360 degrees, and having some of the tail of the pancreas in the twist. I untwisted and examined to see if it could be saved and replaced, but found the spleen soft and full of blood and so necrotic that it would not bleed on cutting. I tore it away from its pedicle and did not have to tie a vessel. I wrapped the pedicle in omentum and closed the abdomen. The spleen was a mass of dark blood clots and weighed one pound. The blood smear made at the time showed nothing unusual. The patient stood the operation well and made a perfect recovery.

The child is now, one year after the operation, normal and rugged, and has not seemed to miss the spleen.

HYDROA VACCINIFORME, SEU ÆSTIVALE (BAZIN); SUMMER PRURIGO (HUTCHINSON).

WITH CASE REPORT.

J. PHILLIP KANOKY, M.D.
KANSAS CITY, MO.

Hydroa vacciniforme is an inflammatory summer dermatosis, commencing in early life and characterized by a vesicular, scarring eruption on the exposed parts. First described by Bazin in 1855, and later by Hutchinson and others, a sufficient number of cases have been reported to make the disease a well recognized entity.

Efforts have at times been made to separate the various conditions classified under the above heading into several distinct diseases, but with our present knowledge of the etiology and pathology of the malady this is extremely difficult. Where the difference appears to be simply one of degree, all other factors being practically identical, a multiplication of names tends only to confuse.

The eruption is symmetrical and confined, for the most part, to the uncovered regions. The lesions are usually preceded by sensations of burning and tension, but these partially or wholly disappear when the eruption is developed. They may be succeeded, however, by slight or marked pruritus. The duration of an individual lesion is short, from three to four days. The papules vary in size from a pinhead to a lima bean. Within a short time a tendency to minute central vesiculation usually becomes apparent and small bullæ gradually develop from a coalescence of the succeeding tiny blisters. These are filled with serum, which rapidly becomes milky in color and later muco-purulent. As a rule the center of the vesicle exhibits more or less depression. This becomes more marked, until finally an iris-like ring with a reddish crust in the center results. Absorption may take place, but excoriation and subsequent crusting with the formation of cicatrices is the rule. The scars resemble those seen in vaccinia, being punched out and clear cut with white, atrophic centers.

The constitutional symptoms are slight, and in the summer type of the disease the attack is usually mild and continuous, extending throughout the heated term with occasional severe exacerbations.

The malady is a rare one, especially in America. It occurs most frequently in boys. The essential factors seem to be exposure to sun and wind. The urine may show the presence of hematoporphyrin, and an eosinophilia is present at times.

Histologically the primary lesions are those of a vesicle situated in the middle layers of the rete, with round cell infiltration in the adjacent corium, especially in the neighborhood of the blood vessels. Later there is a necrosis resulting from the enormous dilatation and thrombosis of the superficial vessels in the center of the nodule. This progresses downward into the lower layers of the corium almost to the subcutaneous tissue, and considerable hemorrhage into the broken down tissue often results. No fixed cell proliferation appears to

occur in either the corium or epidermis. No etiologic agent has been demonstrated.

The diagnostic features are the character and distribution of the eruption, the subsequent scarring, the yearly recurrences in the same season, and the commencement of the disease in early life. It is to be differentiated from erythema multiforme, vaccinia, dermatitis herpetiformis, xeroderma pigmentosa, syphilis, eczema, acne varioloformis and pemphigus.

The treatment consists of mild, soothing, protective applications, such as zinc, iodoform, resorcin or weak tar ointments, combined with prophylactic measures to shield the parts from sun, wind and heat. The use of orange, red or dark-colored veils has been suggested. Internally, the administration of arsenic, salicin or quinin may be tried.

REPORT OF CASE.

History.—F. C., 8 years of age, female, was first seen Sept. 7, 1907. She was born in Kansas City, and has lived here all her life. The father is 43, mother 40, both Americans, healthy, and no family history of importance. Two brothers (one has acne) and two sisters, all living and well. She had measles at the age of 5, and scarlet fever at 6, but her recovery from both was uneventful and complete. General health is now excellent. She is fond of exercise and outdoor life. In summer she generally wears a knee-length dress, with short sleeves, a broad sunshade hat or bonnet, and sandals.

The present affection first showed itself when she was 4 years of age. In May of that year (1903) she complained to her mother of a slight papular eruption on her forearms. There was some itching present and the lesions were thought to be due to insect bites. Later a similar condition manifested itself on the outer and anterior surfaces of her legs. During the following winter she was entirely free, but early in the spring of 1904 there was a recurrence. The mother then noticed the scarring for the first time.

Each year the disease has become more severe. Up to this time the outbreaks have been confined entirely to the legs, forearms, and dorsal surfaces of both hands. There has been no constitutional disturbance at any time. There has always been some itching.

The patient is a decided blonde, strong and well-nourished. Numerous lesions, interspersed with the scars left by previous attacks, are scattered over the forearms, backs of hands, and on the legs, from the knees down to the ankles. There are no signs of the eruption on the face. This is unusual, but is probably accounted for by the fact that she has always worn a wide hat or bonnet while in the sun.

The lesions, from the history, commenced as small red papules and were vesicular when first seen. Later, a few of the ones not broken by the application of the ointment became umbilicated, and the depressed centers showed the characteristic dark floor, with ultimate crusting and cicatrix formation.

Considerable pigmentation is observed in those areas where the necrosis has been insufficient to cause pitting. The most pronounced scarring has taken place on the legs, and, at the present time, the eruption is more severe there than elsewhere. Only the inguinal glands are enlarged. They are hard and discrete.

A careful examination of the urine shows the presence of no hematoporphyrin or other abnormal constituent.

The blood pressure is a trifle high, 114 mm. (Riva-Rocci), and the Hb. percentage is 90.

Quantitative examination of the blood shows the number of red cells to be normal, but a considerable leucocytosis (7,200), and a slight eosinophilia (7.1 per cent.) are present.

Permission to do a biopsy was refused.

Treatment.—Four weeks' treatment with mild antipruritic applications locally, and intestinal antiseptics internally has completely relieved the itching, but the majority of the lesions have followed the usual course and continue to do so.

INFECTION WITH FLY LARVÆ.

A. A. SPOOR, M.D.
BIG RAPIDS, MICH.

History.—In June, 1907, I was called to see an infant, aged 4 weeks. The mother informed me that "worms" were coming through the skin of the child. The baby showed several lesions around the neck, face, forearms and hands. Some of the lesions were only slightly raised, with a red areola around a whitish center of seropurulent material about the size of a pinhead, from which the "worm" escaped when the lesion was pressed between the fingers, as one would extract a comedo. After the extraction of the larva, the small lesions healed very rapidly, almost disappearing in 24 hours. The larger lesions represented a more severe type of inflammation and contained larger larvæ. One lesion on the dorsum of the hand between the bases of the thumb and index finger contained two large larvæ. This lesion was as large as a plum, swollen, raised, hard and had the color and shiny appearance of an erysipelatous inflammation. The lesions contained no pus except the small drop of seropurulent material at the very summit of the lesion which harbored the head of the larva. Extraction of the larvæ left holes in the lesions, which did not collapse, and looked as if they had been punched out of leather with a sharp punch.

Appearance of Larvæ.—In all, fourteen larvæ were taken from the neck, face, forearms and hands, which represented the uncovered portion of the body. All the larvæ were extracted in thirty-six hours. They varied in size and macroscopically resembled somewhat the small worms found in apples. The head end showed a small black speck, which under the microscope proved to be mandibles. Unfortunately, the specific identity of the larvæ was not made, owing to the fact that I sent a specimen to a university for identification, and was referred to the U. S. Bureau of Entomology. By the time I received a reply from the university the specimens were all destroyed and I had nothing left but some microscopic drawings to send to the U. S. Bureau of Entomology. L. O. Howard, chief of bureau, reports as follows:

"Examination of your drawing indicates that the creature is an insect larva, probably the first larval stage of some eastern fly. The larvæ of the flies of the genus *Hypoderma* are similar, but there is some difference in the chitinous framework of the mandibles and the pair of spines at the tip of the body."

Probable Source of Infection.—The baby has fretted a great deal of the time since birth, the mother tells me, until she noticed the "worms." The family lives on a street continuous with a road leading to the country. Daily, many cows are driven by the house to and from pasture, and as there are no screens to the doors and windows of the house, it is probable that some fly or flies gained entrance and stung the baby. The child appeared healthy in other respects, was well nourished, and had no sores or lesions on it until the development of the lesions caused by the larva. The baby was fed only from the mother's breast and was kept neat and tidy.

Corpus Luteum Extract in Treatment of Ovarian Disturbances.—At the meeting of the Brazilian National Academy of Medicine, August 8, F. Magalhaes reported ten cases of ovarian disturbances in which marked benefit had been derived from treatment with extract of the corpus luteum. He believes that the corpus luteum seems to have an action on the uterine mucosa, and therefore tried the extract of the corpus luteum in two cases of uterine hemorrhage which had resisted all other measures, with prompt success. In another case, a young woman who had suffered from dysmenorrhea had no further disturbances after a course of the extract in pill form. In three other cases this treatment put an end to climacteric hemorrhages and other disturbances, as also in a case of surgical menopause. Another patient was cured of hysteric crises, occurring from two to five times a day. The extract also proved beneficial as a palliative in a case of hemorrhagic uterine fibroma and in one of epithlioma of the cervix. His communication is summarized in the *Brazil Medico*, Aug. 22, 1907.

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SATURDAY, NOVEMBER 23, 1907.

CHRONIC POLYCYTHEMIA WITH CYANOSIS AND ENLARGED SPLEEN.

In 1902 Saundby and Russell[1] described a case of cyanosis with enlarged spleen and a great increase in the number of red blood corpuscles. In their paper they refer to other similar cases already reported, more particularly those by Cabot,[2] one of whose cases is spoken of as chronic cyanosis without discoverable cause ending in cerebral hemorrhage. Saundby and Russell believed that these cases constituted a definite clinical entity and one that was new to the medical sciences. In 1903 Osler[3] reported several cases of chronic cyanosis, polycythemia and enlargement of the spleen. In this paper Osler points out that the principal symptoms of the cases were weakness, prostration, headache and vertigo. The blood showed great increase in viscidity, recognizable as it dripped from the finger or ear, being thick and sticky; the number of red corpuscles was greatly increased, as many as twelve millions per cubic millimeter having been observed.

Since then several additional cases have been reported and thorough postmortem examinations have been made in some, notably by Parkes Weber and Watson,[4] Hutchison and Miller[5] and Westenhoeffer.[6] Westenhoeffer's case, which is designated as one of plethora vera, occurred in a man of twenty-eight, who died with acute meningeal symptoms, the cause of death being, however, an extensive hemorrhage into the brain. The organs showed a most intense hyperemia and the quantities of blood that ran out as the vessels at the root of the heart were cut are spoken of as enormous. All the organs were intensely red at the same time, as none of the changes peculiar to long continued passive congestion were noticeable. In this case, as well as in most of the others examined after death, the marrow of the long bones was uniformly dark red, resembling the marrow in childhood, and microscopically were seen all the evidences of activity characteristic of the normal red marrow. In this connection it may be noted that in Saundby and Russell's case the marrow of the femur is said to have been normal on naked eye inspection, but it was not examined microscopically. In Westenhoeffer's case, as well as in others, there was great enlargement of the spleen with practically normal structure.

The striking features of this disease are then the chronic cyanosis, the changes in the blood, the enlargement of the spleen, and the hyperplastic marrow of the long bones. There seems to be no doubt but that the cyanosis or, more correctly, apparent cyanosis, is largely the result of dilatation and overfilling with blood of the smaller cutaneous vessels. All the authors appear to agree that such causes of chronic cyanosis as accumulation of carbon dioxid in the blood, methemoglobinemia and acetanilid poisoning did not exist in the instances studied by them, and it is important to note that this cyanosis exists without noticeable respiratory distress. The great redness of the fundus of the eye has been emphasized.

As indicated, the condition of the blood is one of true polycythemia, there being an increase in all the cells normally present in the blood, notably the red blood corpuscles, and this increase is associated with a corresponding increase in hemoglobin. Bence[7] and others have found nucleated red corpuscles, but only after some search. The viscosity of the blood may be from three to four times greater than normal, and this is attributable to the increase in the number of corpuscles. On account of the viscosity, hypertrophy of the heart and increased vascular tension and hemorrhages may occur. The increase in the number of red blood corpuscles might be due to a true overproduction, to diminished disintegration, or to a simple condensation of the constituents of the blood. In reality it does concern an overproduction of all the constituents of the blood and naturally the cause invites consideration. As pointed out by Osler and others, true polycythemia occurs in conditions that interfere with the proper aëration of the blood, such as heart disease, congenital as well as acquired, carbon dioxid poisoning, and sojourn in high altitudes. It has been suggested that the polycythemia in the disease under consideration is really the outcome of a mode of adaptation of the hematopoietic system to diminished pressure of oxygen in the blood. Now certain facts indicate that in this disease the hemoglobin takes up insufficient oxygen. Thus v. Koranyi found that inhalation of oxygen rapidly lessens the red blood corpuscles, and this is confirmed by Bence, who notes that after inhalation the number of corpuscles may fall one or one and one-half millions at the same time as there is a diminution in the viscosity of the blood. Now it is known that in the other forms of polycythemia just mentioned inhalation of oxygen has precisely this same effect. Furthermore, Mohr has found that the blood in these cases is unable to take up any more oxygen than normal blood, so that, while other explanations might be brought forward, it seems that at present the disease is best explainable as the result of a primary diminution

1. Lancet, 1902, i, 515.
2. Boston Med. and Surg. Jour., June 20, 1901.
3. Trans. Assoc. Am. Physicians, 1903, xviii, 299.
4. Brit. Med. Jour., March 26, 1904.
5. Lancet, March, 17, 1906.
6. Deutsche med. Wochschr., 1907, xxxiii, 1446.
7. Deutsche med. Wochschr., 1906, xxxii, p. 1451.

in the absorption of oxygen with secondary hyperplastic changes in the bone marrow and a resulting compensating increase in formation of red corpuscles. The final cause of the diminished oxygen absorption is not known; possibly the hemoglobin is so to speak diseased.

As to treatment, Rosengart finds that the removal of from 500 to 600 cubic centimeters of blood by venesection is followed by temporary general improvement, so far as the congestion, headache and vertigo are concerned. Hence used inhalations of oxygen with good effect on the subjective symptoms as well as on the condition of the blood. On account of the easily recognizable features —the cyanosis, or better, congestion, the polyglobulism, and the enlarged spleen—the disease should not be difficult to diagnose if proper methods of examination are employed. So far the cases have occurred in adults. Further observations may be anticipated with much interest as the disease offers many attractive problems for study, be it from the purely descriptive, the etiologic or the therapeutic point of view.

THE CHARACTER AND EFFECTS OF TRACHOMA AMONG IMMIGRANTS.

The increasing prevalence of trachoma in the United States attracted widespread attention for some time prior to 1897, and because of its contagious character and inimical effects the disease was in that year classified as "dangerous, contagious" within the meaning of the immigration law—thus making mandatory the deportation of aliens so afflicted. Since that time thousands of aliens afflicted with trachoma have been excluded from landing in this country. It has been shown that during the fiscal year ended June 30, 1906, alone, 29,600 patients with trachoma were prevented from embarking at foreign ports, and 1,600 individuals with the disease were certified as having trachoma on arrival.[1]

The physical and mental examinations of arriving aliens are made by medical officers of the Public Health and Marine-Hospital Service who are responsible for the efficiency of such examinations. Cases of undoubted trachoma are immediately certified, and suspicious individuals must be held pending a definite diagnosis. Correct diagnosis in every case is of the highest importance, both to the alien and to the state, as the certification of trachoma accomplishes the deportation of the alien concerned.

As an aid in these examinations the United States Public Health and Marine-Hospital Service has just issued a notable bulletin on the character and effects of trachoma, prepared under the direction of the Surgeon General by Passed Assistant Surgeons Clark and Schereschewsky.[2] These authors point out that during the past twenty-five years the tide of immigration has changed, and that the bulk of immigration which formerly came from northern Europe now comes from Russia and the Mediterranean littoral.

1. Annual Report, P. H. and M.-H. S., 1906, p. 60.
2. Trachoma, Its Character and Effects, Bulletin, P. H. and M.-H. S., 1907.

The factors contributing to the dissemination of trachoma are referred to, and the tissue changes are briefly described. For the purposes of description and diagnosis, Clark and Schereschewsky divide the trachomatous process into stages corresponding with the pathologic conditions present, that is, the stage of invasion, acute or initial conjunctivitis; the stage of follicular extrusion, or beginning cicatrization; and the stage of cicatrization and contraction.

Reference is made to the difficulty of diagnosis and the responsibility of medical officers engaged in the examination of aliens as compared with that of medical practitioners in general. In the case of the latter an error is of comparatively little moment, while in the former the certification of individuals not afflicted with trachoma would result in untold hardship to the immigrant.

It is necessary, therefore, for the detection of trachoma to evert the eyelids of all arriving aliens and to detain those in whom the symptoms are suspicious until a positive diagnosis can be made.

This pamphlet will be of value to public health officials and others engaged in the prevention of trachoma, as it represents the experience of these officers, acquired during years of observation and intimate contact with the disease at our ports of entry.

There can be no doubt but that the exclusion of trachoma during the past ten years has had an influence in lessening the prevalence of the disease in this country. When it is considered that the presence of the disease in any area practically implies its previous importation, and that in some sections of Europe from which immigrants come 60 per cent. of all cases of blindness are due to this cause, measures looking to its exclusion can be appreciated.

It is easier to prevent trachoma than to cure it, and other republics in the western hemisphere would do well to adopt similar measures for its exclusion. By this means the establishment of new foci would be prevented and the danger of its appearance in the public schools would be diminished. Measures for the eradication of the disease among school children and others could then be continued with hope of ultimate success.

EDDYISM VS. AN EDUCATED PUBLIC.

In the *Congregationalist*, November 16, appears a review of an advance copy of a book entitled "Christian Science and Physical Healing" by Rev. Lyman P. Powell, rector of the Episcopal Church of Northampton, Mass. This book is declared by the editors of the *Congregationalist* to be "one of the most valuable contributions on the subject that has yet been made." An examination of a summary of the book would seem to justify this opinion. In no sense is it a vituperative or sensational attack on Eddyism, but simply a thorough, scientific investigation of its claims and characteristics.

In summarizing Mrs. Eddy's case the author states

that she makes three claims for Christian Science: first, that it is "the most effective curative agent in medical practice;" second, that it is "Jesus' way of healing;" third, that it was "abandoned in the early centuries by the Christian church and, after being revived by her, is to-day employed by Christian Science only." The second and third claims belong to the theologian and the church historian. It is gratifying and refreshing, however, to observe the manner in which Mr. Powell disposes of the first claim. He properly claims that scientific evidence is needed to prove this assertion and that Mrs. Eddy offers none, except the statement that "the divine principle of healing is proved in the personal experience of any sincere seeker of truth." This, as Mr. Powell rightly holds, is simply begging the question. He further says "If Christian Science has ever cured malignant cancer, we want to know from an expert diagnostician that the disease was cancer. If Christian Science has ever cured a case of palsy we have a right to know whether that case was one of hysterical paralysis or functional paraplegia, or was actual paralysis due to structural disease of the spinal cord or some other part of the motor-nerve system. If Christian Science has cured true diabetes, which Dr. Osler says he has never seen cured, we have a right to know whether Fehling's test or Trommer's test, or the fermentation test was used and whether it revealed diabetes or merely polyuria."

This dispassionate and rational statement of the case is in pleasing contrast to the invective and undiscriminating denunciation which many religious writers have used in discussing the subject. It is gratifying to see the scientific aspect of the question presented by a clergyman whose arguments will not be subject to the suspicion of interestedness, which the laity seem invariably to attach to the scientific objections of the medical profession. One of Mr. Powell's conclusions is that "the answers made by accredited exponents of Christian Science to the criticisms made against it satisfy none except those who read carelessly and think loosely." Such persons constitute a large proportion of the public. The task of so educating the people that they will read carefully and think logically seems almost a hopeless one, and yet it is the only way in which the public can be influenced.

THE DISAPPEARING CHILDREN.

It is not often that a fashion journal touches so serious or so important a topic as the gradual disappearance of the child from American families, but an excellent review of the curious situation developing in this regard appears in the November number of the *Delineator*. We have been a little surprised that it has not given rise to more comment, for it contains some startling details. Mrs. Lydia K. Commander, who for some years has made a special study of this subject and has written on it on various occasions, calls attention to the fact that probably 2,000,000 American homes are without a child. Her statistics are founded on the recent report of a Massachusetts investigation, which shows that about one out of the six homes in the state of Massachusetts is without a child. It is acknowledged that probably conditions are worse in Massachusetts than elsewhere, and so an allowance of 30 per cent. is made for the rest of the country. Even with this, however, the results are striking. On this basis there are over 2,000,000 families who not only are without children but have never had children. A little more than one hundred years ago it was calculated that children formed one-third of the population of the country. According to the last census there were about 18,000,000 children in the country, which is less than one-fourth of the population. This difference does not seem to be much, but in cold figures it amounts to 7,000,000 children. Of course in the meantime many adults have been admitted as immigrants and this has somewhat lessened the proportion that should exist in the matter, but there are at least 5,000,000 additional children that would be with us if anything like the old family life of our great-grandmothers' times still survived.

It is usually said that the smaller number of the children in the family conduces to better health, but it is doubtful if there is any physician of modern times who considers that the one or two children which occur in the families of the wealthy enjoy better health than does the average child among the six or more children of poorer parents who are not in want. The interesting consideration, however, is with regard to the next generation. It seems probable that in America we shall not decrease as France has recently in population during the next generation, but the character of our population will change as markedly as has that of Europe during the past generation. During the course of fifty years the number of Slavs in Europe has more than doubled, though the Latin races have scarcely more than held their own. In this country the statistics from Massachusetts show that the native-born population is actually decreasing, though the number of children in families of foreign birth is enough to make up for the deficiency.

In the meantime it is interesting to realize the process of natural selection that is at work. The same thing has happened at least once before in history—in the case of the Romans. When a people become so individualistic that they do not care to assume the burden of rearing and caring for children they have reached a stage in evolution that is apparently undesirable. As a consequence they are eliminated. It is true that it is they themselves who are the principal factors in bringing about this elimination, but then Nature always uses just this method. One might look for some great cataclysm in the natural order to get rid of an undesirable class of the population and might wonder how it could be brought about. As a matter of fact, it works out so

quietly that no one notices it much, and least of all are they who are affected by it aroused to any concern as to its real significance. Natural selection thus automatically removes the over-selfish from the scene and the drama of life continues with new characters.

HEALTH PROPAGANDA AT YALE UNIVERSITY.

Dispatches from New Haven state that the address of Dr. McCormack before the Committee of One Hundred in Woolsey Hall of Yale University was heard by a large audience. Dr. Irving Fisher, the chairman of this committee, which was formed by the American Association for the Advancement of Science, also spoke, outlining the work which this admirable organization proposes to do. Some idea of the scope and value of the work being done by Dr. McCormack may be obtained when one considers the range and variety of his audiences. He speaks to-day before a small county society of ten or fifteen country practitioners, or an audience of laymen in a little town. To-morrow he may address the faculty of a great university or the members of the legislature of the state. But the work which he is doing is needed just as much in the university center as it is in the country village. The state legislator needs enlightenment as much as the country business man. The preservation and conservation of the lives and health of the people is a subject which, when thoroughly understood, will appeal to all classes except those who are utterly selfish or hopelessly ignorant, and when once the public understands what the organized profession is trying to do and can do with the help of the people, there will not be trained physicians enough to do the work which will be required of them. Dr. McCormack will devote the remainder of November and the first half of December to work in Delaware and Maryland. The work which he is doing is already producing results, and it has only begun.

THE BEARD TREATMENT OF CANCER.

Dr. C. W. Saleeby, the English writer on medical topics who has been publishing rather florid popular articles on the enzyme treatment of cancer, has involved himself in a discussion with the medical editorial writer of the *New York Sun*, in which he hardly appears to have done himself credit. The editorial writer criticised Saleeby's statements in an article in the *Contemporary Review*, and especially his quotation of a case reported by a New York physician as "substantial and authoritative" proof when he must have known that the patient died less than four months after the alleged cure, and that autopsy showed that the body was literally riddled with malignant disease. Dr. Saleeby inferentially admits that he had heard of the outcome of the case, but objects to the charge that he knew the facts. He says: "Say rather that I knew the conflicting statements of the facts, which is not the same proposition." The newspaper man in reply calls attention to the special emphasis which Saleeby had laid on this case in his article in the *Contemporary Review*, and accuses him of still further *suppressio veri* in another specific instance. So far the newspaper man seems to have the best of it. To do no injustice to Dr. Saleeby's argument, it should be said that he attributes the failure, in the first case specifically referred to, to the effects of operation counteracting, by stirring up the remaining cancer cells, the good effects of the trypsin treatment, but this, even if true, does not by any means warrant his use of the case as a brilliant example of success. Accuracy is as valuable and imperative in popular publication of scientific facts as it is in the records intended only for professional readers. A popular writer on science in any of its departments has no right to mislead or misrepresent by giving out half truths or by omission of essential facts. Dr. Saleeby appears to be an enthusiast for the trypsin treatment of cancer and altogether too ready to generalize on insufficient evidence. This was pointed out in an editorial in THE JOURNAL Aug. 4, 1906, and there seems to be no need to vary the estimate there expressed. He is evidently a young man, at least in medicine, as his M.D. degree dates back only to 1904, and he probably either has not yet thoroughly learned or is mentally unable to handle medical facts judicially. His literary facility, like that of some other medical and scientific popularizers, seems to have outstripped his ability to state scientific facts correctly. All of which emphasizes the desirability of editors setting greater value on accuracy and authority than on sensationalism in those who write for them.

THE DURATION OF THE ACTION OF ADRENALIN.

The prompt action of adrenalin in raising the systemic blood pressure has been of great service in such conditions as shock in which the tone of the arterial system has been temporarily depressed. The duration of its action, however, is comparatively short, and to obtain any sustained results it is necessary to repeat the dose frequently. As the result of experiments, Kretschmer[1] reports that the action of adrenalin continues so long as there is any adrenalin in the blood, but that it is very shortly destroyed through the action of the alkalies of the blood and tissues. By the intravenous injection of mineral acids in experimental animals he was able to delay this destruction and thus to prolong the action of the drug to five or six times its usual duration. Just what effect the injection of the acid produces on the animal is not stated, but if it is shown that the alkalinity of the blood may be safely reduced sufficiently thus to lengthen the action of adrenalin it should certainly increase the therapeutic value of this drug.

DIPLOCOCCUS SEPTICEMIA SIMULATING TYPHOID.

Occasionally there is described a clinical picture more or less closely resembling typhoid fever which is found to be due to some organism other than the bacillus of Eberth. According to Oettinger and Fiessinger,[2] these cases of septicemia are perhaps most frequently caused by some member of the diplococcus group. Besides the pneumococcus, the gonococcus, meningococcus, entero-

1. At a recent meeting of the section on internal medicine of the *Versammlung Deutscher Naturforscher und Aerzte*, reported in the Muench. med. Wochschr., No. 42, 1907.

2. Arch. de Med. Exp. et d'Anat. Path., No. 4, 1907.

coccus and the *Micrococcus catarrhalis* have each been isolated from the blood in such cases. These authors have twice found a diplococcus which differs from any of the better known varieties, having characteristics which place it between the enterococcus and the *Micrococcus catarrhalis*. Once it was in pure culture and in the other instances was associated with a tuberculous infection which proved rapidly fatal. A blood infection with one form of diplococcus or another is said to be not infrequent in rapidly progressive cases of tuberculosis. Indeed it is sometimes difficult, as in the case described, to say which is the primary infection. As the custom of resorting to blood cultures in diseases of doubtful nature is becoming more general we shall no doubt recognize many more such cases of blood infection. It is to be hoped, too, that such studies will throw more light on the character of these micro-organisms, some of which are so nearly related that their identity is a matter of doubt in the minds of some of the best bacteriologists.

RATE OF NERVE REACTION IN ENGINEERS.

Two notable railroad wrecks that occurred recently called from a distinguished alienist the opinion that they were due to a lack of quickness of nerve reaction on the part of the engineer. The rate of mental action in controlling physical action, he is reported to have said, is not much quicker than the speed of a fast locomotive, hence he infers that in these special occasions failure in this respect caused the disasters. It is nothing new to have the explanation made of a loss of nerve, in the popular sense of the term, for railroad and other accidents, but there is a suggestion here of a possible use of psycho-physiologic measurements of railroad employés as a preventive of disasters. The suggestion is not particularly new, but it is worth something. If a man is naturally slow in his nervous reaction, or is liable to lose his normal celerity and correlation of perception and action, he may be seriously disqualified for such employments as call for more than normal quickness in this particular. There may have been accidents that were unavoidable so far as the individual responsible was concerned on account of just this defect. There is some room for study of the physiologic psychology of individuals whose powers of quick attention and action are constantly so taxed as are those of railroad engineers, especially those who have control of fast trains.

Medical News

ARIZONA.

Asylum Overcrowded.—The Territorial Asylum for the Insane, Phoenix, with accommodation for 210 patients, is caring for 305, and similar crowded conditions are said to prevail in the other territorial institutions.

Personal.—Superintendent Dr. Ray Ferguson of the Territorial Hospital for the Insane, Phoenix, was assaulted with an ax and seriously injured by a patient, October 31.——Dr. Francis E. Shine, Bisbee, has returned after a vacation in California.

Hospital Notes.—The Shattuck-Denn Hospital, Bakerville, has been opened under the direction of Dr. D. E. Broderick and the employés of the two companies will now be taken care of at this institution. Associated with Dr. Broderick are Drs. F. R. Williams and E. F. Downs.——A contract has been let for the construction of the Arizona Copper Company's Hospital at Metcalf. The building is 56x36 feet and contains three large wards, operating room, nurses' quarters, etc. The cost of the building is about $4,500.——The Calumet Hospital has been incorporated at Douglas.——The White Mountain Hospital Resort was opened at Showlow, Navajo County, last month.

CALIFORNIA.

Society Meeting.—At the annual meeting of the Pasadena Medical Society, November 7, Dr. Henry H. Sherry was elected chairman; Dr. John E. Janes, clerk (re-elected), and Dr. Ernest B. Hoag, councilor.

Hospital Notes.—A site north of the old town of San Diego has been purchased, on which the isolation hospital for the care of communicable diseases will be built.——The new Southern Pacific Park Hospital, San Francisco, is now under construction. It will be a four-story reinforced concrete building, with acommodation for 250 patients, and will cost about $300,000.

Personal.—Dr. H. D. Morrison, Niles, was operated on for appendicitis, October 26, at the Providence Hospital, Oakland.——Dr. Charles W. Lund, Willows, has been appointed division surgeon of the Southern Pacific Railroad, vice Dr. George Watt.——Dr. Henry A. L. Ryfkogel has been appointed city bacteriologist of San Francisco.——Dr. Frank F. Barham, Los Angeles, was thrown from his horse, November 3, and fractured his left leg.

Communicable Diseases.—The epidemic of diphtheria at Johnsville has declined and no new cases have developed.——Favorable reports are received regarding the diphtheria situation at Sultana, Oriso and Dinuba, where the schools had been closed on account of the prevalence of the disease.——The scarlet fever report from Truckee is said to have been greatly exaggerated. There are three cases of the disease in the town and no new cases have developed for two weeks.——The quarantine against diphtheria at Quincy has been raised.

COLORADO.

Hospital Notes.—An artesian well is being sunk at St. Mary's Hospital, Pueblo.——Two large sun parlors have been constructed in connection with one of the buildings for female patients at Woodcroft Hospital, Pueblo.

Sanitary Plan.—The executive council of the Modern Woodmen of America has purchased a tract of 1,000 acres of land near Colorado Springs, known as the Ambler ranch, on which to erect a sanatorium for treatment of members of the order afflicted with tuberculosis.

Personal.—Dr. John R. Hopkins, Denver, has returned from Europe.——Dr. William N. Beggs, Denver, was seriously injured in a runaway accident October 20.——Dr. Caroline D. John, Denver, has recovered from her recent severe attack of typhoid fever.——Dr. Joseph F. Coleman, Montrose, has been appointed health officer.——Dr. George W. McClanahan, health officer of Idaho Springs, is reported to be seriously ill with typhoid fever in Denver.

CONNECTICUT.

Medical Society Meeting.—The Meriden Medical Society at its annual meeting, held October 10, elected Dr. Edward W. Smith, president; Dr. Harold A. Meeks, vice-president, and Dr. H. DeForest Lockwood, secretary-treasurer.

Infectious Diseases.—During September there were reported 292 cases of typhoid fever in 64 towns; 100 cases of diphtheria in 29 towns; 60 cases of scarlet fever in 22 towns; 50 cases of tuberculosis in 23 towns; 35 or more cases of whooping-cough in 11 towns; 17 cases of measles in 9 towns, and 4 cases of cerebrospinal fever in 4 towns.

Deficit in Free Bed Fund.—At a public meeting in Hartford, October 11, a movement was started by those interested in the workingmen's free-bed fund to wipe out a deficit of $10,000 which at present exists. Since its organization, two years ago, the free-bed fund has cared for more than 200 persons and the demand is increasing every year.

September Deaths.—During September 1,393 deaths were reported, equivalent to an annual mortality rate of 16.4 per 1,000. The deaths from infectious diseases were 184, or 13.2 per cent. of the total mortality. Among the principal death causes were: Diarrhea, 212; diseases of the nervous system, 172; heart diseases, 132; tuberculosis, 106; accidents and violence, 99; pneumonia, 51, and typhoid fever, 43. Diphtheria and whooping-cough each caused 9 deaths; cerebrospinal fever, 6; influenza and measles, each 3, and scarlet fever, 2.

ILLINOIS.

Merge Charity Management.—The State Board of Charities is making plans for the merging of the management of the charitable institutions of the state. By this means it is hoped to place the institutions on a plan of management, which will result in the greatest good to the wards of the state and at the same time will reduce in great measure the expenses of maintenance.

Chicago.

City Asked to Take Care of Alcoholics and Contagious Cases.—The board of commissioners of Cook County, at its last meeting, decided to urge the city of Chicago to take charge of its alcoholic and contagious patients. It also recommends the erection and maintenance of a home for convalescents.

INDIANA.

Personal.—Dr. Clement H. Bockoven, Bryant, is ill at the Portland Hospital with typhoid fever.——Dr. John K. Blackstone, Crown Point, is reported to be seriously ill with septicemia due to an operation wound.——Dr. Kenneth I. Jeffries, for several years a member of the staff of the Indiana Eastern Hospital for the Insane, Richmond, has resigned.

Anti-Tuberculosis Association Formed.—Following an address on "Tuberculosis" by Dr. William Porter, St. Louis, at the Commercial Club, Indianapolis, November 4, the Indiana Association for the Prevention of Tuberculosis was organized and the following officers were elected: John W. Kern, temporary chairman; Elisha Havens, Rev. Neil MacPherson, A. G. Cavins and Drs. Harvey A. Moore, Theodore Potter and George M. Wells, vice-presidents; Dr. Edgar F. Kiser, secretary, and Harry A. Crossland, treasurer.

Law Cases.—The license of Dr. Joseph M. Fleenor, Bloomington, is said to have been revoked by the State Board of Medical Registration and Examination on account of violating the Beardsley law by writing prescriptions for intoxicating beverages.——Dr. William H. Nusbaum, Auburn, is said to have been enjoined from practicing medicine in De Kalb County until Sept. 1, 1910, on account of violation of contract when he sold his practice to Dr. Lewis N. Geisinger.——Dr. John A. Ritter, West Baden, was acquitted of the charge of shooting Town Marshal Roberts with intent to kill, on the ground that the shooting was done in self-defense.——In the malpractice suit of Vicie Waldron against Dr. William R. Mattox, tried in Terre Haute, November 8, the jury disagreed.

MARYLAND.

Baltimore.

School Inspection.—Of the 9,295 children of the public schools examined in October, 4,149 were found physically defective. The defects were as follows: Imperfect teeth, 1,170; enlarged tonsils, 750; adenoids, 640, and defective vision, 618.

Buildings Renamed.—The Faculty of Physic of the University of Maryland has named its new building "Davidge Hall" for John Beall Davidge, the founder of the university. It has also changed the name of "Practice Hall" to "Gray Laboratory," after an early benefactor of the hospital.

The Medical Library Building.—An enthusiastic meeting for the promotion of the New Medical Library Building Fund was held November 15. Dr. J. Whitridge Williams presided, and addresses were made by the mayor of Baltimore, Senator Linthicum, the speaker of the house, Hon. Carville D. Benson, Mr. Morris of the Y. M. C. A., Drs. Charles E. Brack, Hiram Woods, Jr., Charles O'Donovan, Robert W. Johnson, Lewellys F. Barker and Arthur P. Herring. A large thermometer marked the progress of the fund toward the $100,000 mark, and ingenious maps on the wall showed those who contributed and those who had paid. A subscription of $10 entitled the subscriber to a brick in the new building. A buffet supper was served and a large number of physicians pledged to give or raise $100 each, while others doubled their subscriptions. About $5,000 was added to the fund, which now stands as follows: Osler testimonial fund, $19,129; Aaron Friedenwald fund, $1,246.87; estimated value of present realty, $12,000, and subscriptions to November 16, making a total of nearly $48,000. On December 3, a play, "Comin' Through the Rye," will be given for the benefit of the fund at Ford's Opera House.

MISSOURI.

Illegal Advertisers Debarred from Mails.—Similarly to previous action against advertisers in Boston, New York, Philadelphia and Chicago, a number of St. Louis concerns are refused the use of the mails to transmit their advertisements. The St. Louis newspapers have been notified by the Postoffice Department. The action is the result of an investigation made by Inspector McAfee, in which he had the cooperation of the Medical Society of St. Louis and the health department of that city. The parties named are as follows:

Doctor De Myers and De Myers-Dennis Medical Company; De Myers Sanitarium, No. 2112 Olive Street; Dennis Sanitarium, No. 2639 Washington Avenue; North Side Sanitarium and South Side Sanitarium, St. Louis. Also has an office at No. 5½ Main Street, East St. Louis, Ill.
Doctor Mahon and Doctor W. T. Mahon, No. 2304 Park Avenue.
Mrs. Pauline Kahn, No. 3117 Nebraska Avenue.
Mrs. Doctor Smith Bruegal, No. 3507 Franklin Avenue.
The South Side Sanitarium, No. 2324 South Twelfth Street.
Mrs. Whittle, No. 2910 Olive Street.
Doctor Demmler and Thomas Remedy Company, No. 3125 Olive Street.
Mrs. Mary Arthur, No. 3129 Morgan Street.
Mrs. A. Schroeder, No. 2907 Franklin Avenue.
Ward Remedy Company, No. 2902 Washington Avenue.
Mrs. Hoelker, No. 2232 Clark Street.
Mmes. Marrifield and Unger, No. 6407 Easton Avenue.
Doctor Fitzporter and Galen Medical Institute, No. 1516 Chestnut Street.

NEW YORK.

Charities Conference.—The New York State Conference of Charities and Correction was held at Albany November 12-14. Among the subjects discussed were "Industrial Accidents in New York State" and "The Need of a State Commission of Investigation." It was shown that more than half of the industrial accidents occur to men under 40 years of age and in unskilled laborers. Of the men injured 25 per cent. earned only from $5 to $10 a week. In Manhattan and Brooklyn alone the committee found 756 cases of accident, in 57 per cent. of which the injuries were permanent. The report urged a state commission of investigation and the appointment of a special committee to agitate for the passage of the necessary legislation. Dr. Adolph Meyer, pathologist for the New York State Hospital for the Insane, Wards Island, New York City, said that there were within the limits of the state many insane patients who were still taken to jail. The number of insane under the care of the New York state commission in lunacy had reached the total of 27,102, or 745 more than last year. Of these more than 1,000 had committed criminal offenses before their commission to the insane asylum. The state still lacked accommodation for more than 2,000 of its insane. The metropolitan district has 12,328 patients and a capacity of less than 9,500. An additional institution on Staten Island or in Rockland or Westchester counties would relieve the congestion. Dr. Meyer said also that an institution for defective children was much needed in the neighborhood of New York. Dr. Edward P. Angell of Rochester, chairman of the committee on the care of the sick, presented the report of that committee. He said that so great had been the decrease in the number of people suffering from disease that it had actually affected the income of the average practitioner. He gave full credit for this to the health departments and sanitarians. He thought that far more time had been spent in the last twenty-five years in the effort to prevent disease than in the study of remedies for their cure. Among the officers elected were Dr. Edward B. Angell as one of the vice-presidents, and Dr. Orlando T. Lewis, secretary.

New York City.

Seaside Hospital Closes.—The Seaside Hospital at New Dorp, Staten Island, is being closed for the season; no more patients will be admitted. It became necessary to close the hospital on account of the present financial conditions and the impossibility of raising funds to carry on the work.

Old Harlem Hospital.—Some of the leading citizens of Harlem are behind a movement to have the old Harlem Hospital reopened, and there appears to be no question but that the State Board of Charities will approve of the reopening and grant a charter. Since this hospital was closed the sick have to be treated in the new hospital, which is about a mile distant. The old buildings are situated on One Hundred and Twentieth Street, and this is the center of an Italian neighborhood of nearly 100,000 population, while the population of other nationalities amounts approximately to 450,000.

Bequests.—George C. Taylor, whose estate is valued at about $8,000,000, left to St. Luke's Hospital $25,000; Society of New York Hospital, $25,000; Sheltering Arms Hospital, $25,000; St. Mary's Free Hospital for Children, $25,000; Home for the Incurables, $15,000; St. John's Guild, for its Seaside Hospital, $25,000; Presbyterian Hospital, $25,000; and Trinity Association, for its Seaside Home, $25,000.——The will of the late Alexander Maitland, who died at Princeton, October 25, bequeaths $20,000 to the Presbyterian Hospital, and $10,000 to the Presbyterian Rest for Convalescents at White Plains.

Creameries Inspected.—Dr. Thomas Darlington, president of the Department of Health of New York City; Arthur J

O'Keefe, deputy police commissioner of New York; Dr. Alvah H. Doty, health officer of the port of New York; Dr. A. Blauvelt, chief inspector of contagious diseases; Russel Raynor, chief sanitary inspector, and W. E. Benton and Russell Sturgis, inspectors of food, form a party which is making a tour of inspection of all the creameries along the line of the New York, Ontario & Western Railroad to determine if there are any improvements in conditions during the past year. So far as they have gone they report finding conditions much improved as compared with last year.

NEW HAMPSHIRE.

Contagious Diseases.—There are reported from Nashua 18 cases of typhoid fever.——Diphtheria is reported to be prevalent in Keene.——Several schools at Peterboro have been closed on account of the prevalence of diphtheria.

Personal.—Dr. Charles P. Bancroft, superintendent of the New Hampshire State Hospital, Concord, was tendered a banquet at the University Club, Boston, by a number of his former assistants, October 16.——Dr. John H. Neal, Rochester, has moved to Seattle, Wash.——Dr. Darius S. Dearborn, Milford, has retired from active practice and will take up his permanent residence in Denver, Colo.

Medical Society Meetings.—The ninth annual meeting of the French Medical Society of New Hampshire was held at Manchester recently, when the following officers were elected: President, Dr. Joseph Theriault, Concord; vice-president, Dr. Auguste Guertin, Nashua; secretary, Dr. George H. Fontaine, Manchester; treasurer, Dr. Evariste C. Tremblay, Manchester, and councilors, Drs. Damase Caron, Franklin; Noel E. Guillet, Manchester; Oswald Maynard, Nashua; Henri T. Fontaine, Suncook, and Wilfred L. Biron, Manchester.——The one hundredth anniversary meeting of the Center District Medical Society was held October 8 in Concord.——The one hundredth annual meeting of the Strafford County and District Medical Society was held in Dover, November 2. The following officers were elected: President, Dr. Dudley L. Stokes, Rochester; vice-president, Dr. Louis W. Flanders; secretary, Dr. Harry O. Chesley; treasurer, Dr. A. Noel Smith; and delegates to the state society, Drs. George A. Tolman and L. W. Flanders, all of Dover.

NEW JERSEY.

October Vital Statistics.—During October, 2,899 deaths were reported in the state. Of these, 759 were of infants under 1 year; 308 of children over 1 year and over 5 years; and 688 individuals of 60 years and over. There were 506 deaths less than in the previous month; a decrease is noted in the mortality rate from typhoid fever, measles, whooping cough, diphtheria, tuberculosis, cerebrospinal meningitis and infantile diarrhea, and an increase in deaths from scarlet fever and pneumonia. Chief among death causes for the month were: Infantile diarrhea, 366; nervous diseases, 346; tuberculosis, 313; circulatory diseases, 292; diseases of the digestive system, 233; nephritis, 188; pneumonia, 143; cancer, 112; typhoid fever, 51; diphtheria, 39; scarlet fever, 22; whooping cough, 20; measles, 3, and malarial fever, 2.

NORTH CAROLINA.

New Laboratory Building.—The State University trustees at their recent meeting appropriated $30,000 for a new laboratory building for the department of biology.

Mortuary Reports for September.—During September 305 deaths were reported, equivalent to an annual death rate of 15.8 per 1,000. Chief among death causes were consumption, with 36; diarrheal diseases, with 29; typhoid fever, with 28; heart disease, with 27; brain disease, with 12; accidents, with 11; nervous diseases and malarial fever, each with 10; pneumonia, with 7; suicide, with 4; violence, with 2 deaths, and diphtheria and whooping-cough, each with one death.

District Society Meeting.—The third semi-annual meeting of the Tenth District Medical Association of North Carolina was held at Hendersonville, November 5, under the presidency of Dr. Lewis B. McBrayer, Asheville. Dr. Arthur R. Guerrard, Flat Rock, read a paper on the "Present Status of the Treatment of Diphtheria." After discussion, a resolution was adopted urging the State Board of Health at once to provide free antitoxin for use in all cases of diphtheria among the indigent classes, either by the establishment within the confines of the state of a plant for its preparation, or by purchase and distribution. The association adjourned to meet in April next in Asheville.

OHIO.

Medical Club Election.—The Women's Medical Club of Columbus held its first annual meeting October 26. Dr. Sara E. Fletcher was elected president; Dr. Ida M. Wilson, vice-president, and Dr. Jane R. Husted, secretary and treasurer.

Personal.—Dr. Jasper W. Jolley, Morral, who has been seriously ill at his home, is reported to be convalescent.——Dr. Charles E. Sawyer, Marion, has been elected a member of the committee on the State Hospital for Crippled Children.——Dr. Harry Silver has been appointed district physician of Hamilton, vice Dr. Linus French, resigned.——Dr. A. C. McNutt, a pioneer practitioner of Crawford County, celebrated his eightieth birthday anniversary at his home in Bucyrus, October 26.——Dr. Frank McCafferty, Columbus, who has been seriously ill with septicemia, is convalescent.——Dr. Charles H. Lisle, Mansfield, has gone to Alford, Cal., for the winter.——Dr. Frank T. Lindsay, Xenia, who has been seriously ill, is now reported to be convalescent.——Dr. William H. Lewis, Cincinnati, sailed for Italy November 2.——Dr. Seth W. Fuller, 94 years of age, said to be the oldest active practitioner in central Ohio, is ill at his home in Bellefontaine.——Dr. H. Stowe Garlich has returned to Cincinnati, after a four-months tour of the West.——Dr. Earl Wilson, interne in the Cincinnati City Hospital, is convalescent from septicemia due to an autopsy wound.

OREGON.

Smallpox.—Smallpox is said to exist at Montavilla, a suburb of Portland. The school children of the place have been vaccinated and the school building and infected houses thoroughly fumigated.

License Restored.—The license of Dr. Joseph D. Kelly, Portland, which was recently revoked by the State Board of Medical Examiners on the ground of unprofessional and dishonorable conduct, is said to have been restored October 24, as the attorney who prosecuted the case did not appear at the time set for hearing.

Fight Against Plague.—The health officer of Portland has petitioned the city council for more funds to be used in fighting against the introduction of bubonic plague into the city. Active measures are being taken, by offering a 5-cent bounty on rats, preventing the animals from leaving ships, and cleaning the water front of rubbish.

PENNSYLVANIA.

Large Bequest to Hospital.—By the will of the late George C. Taylor the Moses Taylor Hospital, Scranton, will receive $750,000.

Tuberculosis Dispensaries.—State tuberculosis dispensaries have been established at Carlisle, Wilkes-Barre, Reading, York and Honesdale, and it is said that one is to be established at Norristown.

Scarlet Fever.—At Glen Lyon, where scarlet fever is reported to be epidemic, four physicians of the State Department of Health completed their work October 25. They found 65 cases and 17 deaths in the town and report that all schools have been closed and that the town authorities are taking every precaution to prevent the spread of the disease.——An epidemic of scarlet fever is reported in Breslau.

Personal.—Dr. Raymond W. Battles, West Millcreek, has retired from practice and removed to Isle of Pines, south of Cuba.——Dr. Edward P. Plank has been appointed first assistant to the State Tuberculosis Dispensary, Carlisle, and Dr. Americus R. Allen has been appointed consulting physician.——Dr. Homer C. Miller, Altoona, is ill with septicemia.——Dr. W. Knowles Evans, Chester, is critically ill with typhoid fever at the Crozer Hospital.——Dr. John A. Campbel', Williamsport, was operated on for appendicitis at the Williamsport Hospital, October 27.

Philadelphia.

Hospital Reports.—The report of the Mount Sinai Hospital for October shows that 70 patients were admitted to the institution during the month; 4,441 persons visited the hospital dispensary, and 306 cases were treated in the emergency ward.——The Howard Hospital reports that in October 64 patients were admitted to the wards; 205 persons were treated in the accident department; 648 patients visited the dispensaries, and 3,394 prescriptions were compiled.——The Charity Hospital of the city of Philadelphia during the month of October treated 251 medical cases, 348 surgical cases, 180 cases of disease of women and children, 53 patients in the department of eye, 33 in that of diseases of the ear, and 41 in that of the diseases of the nose and throat. During the month 709 prescriptions were compounded.

Bequests.—The will of the late Eliza R. Weeks bequeaths $5,000 to the Episcopal Hospital, to be devoted to the establishment of a bed in memory of her husband, Dr. Alfred Weeks.——The will of the late Henrietta Graff bequeaths $105,000

to the following institutions: Pennsylvania Industrial Home for Blind Women; Home and Asylum for the Aged and Infirm of the Lutheran Church; the Zoological Society of Philadelphia; the Academy of Natural Sciences; the Philadelphia Home for Incurables, and other institutions.——The will of the late Isaac Saller bequeaths $1,000 each to the Society of United Hebrew Charities, the Jewish Hospital Association, the Jewish Foster Home, and Orphan Asylum, and $500 to the Jewish Maternity Hospital.——By the will of the late Mrs. Mary J. C. Reynolds, the Philadelphia Home for Incurables will receive $1,000.

TENNESSEE.

Tennessee College Opens.—The Tennessee Medical College, Knoxville, opened for its twentieth annual session November 1. The address of welcome was given by Hon. Henry R. Gibson.

GENERAL.

Physiologists to Meet.—The American Physiological Society will hold its twentieth annual meeting in Chicago, December 31, in Room 25, Physiology Building, University of Chicago. The society will hold joint sessions with the American Society of Biological Chemists and the Section on Physiology and Experimental Medicine of the American Association for the Advancement of Science.

Personal.—Dr. Carlos Finley, chief of the Department of Health and Sanitation, Havana, Cuba, has been presented with a medal by the Liverpool School of Tropical Medicine in recognition of his yellow-fever investigations.——Major Paul F. Straub, surgeon, U. S. Army, has been detailed to represent the Medical Department of the Army at the Third International Sanitary Conference to be held in the City of Mexico, December 2.

Mexican Notes.—The health board of the City of Mexico is making strenuous efforts to maintain such sanitary conditions as will make impossible a return of typhus in the city during the winter.——The Supreme Court of Mexico is said to have affirmed the sentence of death against Dr. C. S. Harle, formerly of El Paso, Texas, and two other individuals charged with conspiracy to murder, in order to collect life insurance, and they are to be executed at Chihuahua, December 6.

Lepers Plead for Healer.—A petition bearing the signatures of 525 lepers has been sent to the Territorial Board of Health of Hawaii from the leper settlement, Molokai, asking that J. Lor Wallach, Honolulu, who is said to have been convicted of practicing medicine without a license, be allowed to treat them with a remedy which he claims to have for leprosy. The board is said to have evidence that Wallach is a fraud, but among laymen and native Hawaiians he is said to have an extraordinary following.

Philippine Medical College.—The following appropriations have been made by the Philippine Commission for the Philippine Medical College: Thirty-three thousand six hundred and twenty dollars for salary and wages; $26,574 for contingent expenses; $720 for maintenance of internes and $280 for the purchase of clinical apparatus. An appropriation of $12,500 was also made for the endowment of beds in St. Paul's Hospital.——The advisory board has suggested to the board of control that a school of midwifery be established in connection with the school. The new hospital, for which $390,000 has recently been appropriated, will contain a maternity ward and, on the establishment of that ward, the necessary material for giving practical instruction in midwifery will be available.

Railway Surgeons Meet.—At the fifth annual meeting of the Pacific Association of Railway Surgeons, held in Los Angeles, Cal., October 21, the following officers were elected: President, Dr. John R. Colburn, Los Angeles; vice-president, Dr. George A. White, Sacramento; secretary, Dr. Frank L. Adams, Oakland, and treasurer, Dr. James P. H. Dunn, Oakland.——The thirteenth annual meeting of the Association of Big Four Railway Surgeons was held in Cincinnati, November 7. The following officers were elected: President, Dr. Edward G. Reynard, Union City, Ind.; vice-presidents, Drs. Jacob A. Kimmell, Findlay, Ohio; James T. Musselman, Paris, Ill., and Charles W. Frink, Elkhart, Ind., and secretary-treasurer, Dr. Thomas C. Kennedy, Shelbyville, Ind. The next meeting is to be held in Indianapolis.

CANADA.

Epidemics.—The epidemic of smallpox at Oakville, Ont., for the past six weeks, has been entirely overcome.——There is an outbreak of typhoid fever at Almonte, Ont., where forty cases have been reported.

New Building for College.—The Ontario College of Physicians and Surgeons has purchased, for about $18,000, property on University Avenue, for its new building. It was decided by the medical council to use the present building for a year and then to rebuild at a cost of $65,000.

Tuberculosis.—A citizen of London, Ont., has contributed $20,000 toward the building of a consumption sanatorium near that city.——Dr. Gordon Bell, Winnipeg, bacteriologist to the Manitoba Board of Health, has selected a site at Ninette, Man., for a provincial sanatorium for consumptives.

Bequests.—By the will of the late Mr. Henry James, Toronto, the Institute for the Blind, Brantford, Ont., and the Sick Children's Hospital, Toronto, will benefit to the extent of $45,000. For 21 years one-half the income from the estate will go to these institutions equally. After that time the balance of the accumulations and the estate proper will go to the Children's Hospital, Toronto.

Medical Inspection of School Children in Toronto.—The board of education of Toronto has decided to adopt a system of medical inspection of schools. Signs of disease or defects in children will be observed by teachers and reported to the family physician of each pupil affected. Where there is no family physician they will be reported to the medical health officer direct. This system will be pursued for one year and report made to the board of education.

Fewer Insane Hospitals Needed.—The report of the Ontario Commission, which, during the past summer, investigated the methods of psychiatric practice in vogue in Germany, states that there should be fewer institutions in the province for treatment of chronic insane. These should be established close to large centers and added to and improved when required. There should be larger staffs of physicians specially qualified to conduct this work. Insane criminals and tuberculous patients should be confined in separate institutions. There should be psychiatric hospitals at all university centers in the province for the treatment of all acute forms of insanity. Should the Ontario government follow out these suggestions it would mean that the hospitals at Toronto, Kingston and London would be greatly enlarged and that psychiatric clinics would be established at these places in connection with the teaching of medicine.

Medical Military Association Revived.—The Association of Medical Officers of the Militia of Canada, which was organized in 1902, has recently been revived and reorganized. All medical officers of the militia and Royal Army Medical Corps are *de facto* members without election. The following officers have been elected: Honorary president, Sir Frederick Borden, M.D., minister of militia and defense; honorary vice-presidents, Col. E. Piset, deputy minister of militia and defense, and Lieut.-Col. G. Carleton Jones; president, Col. G. Sterling Ryerson, Toronto; district vice-presidents, Capt. D. H. Hogg, Lieut.-Col Hillary, Lieut.-Col. Duff, Major J. D. Courtenay, Major MacTaggart, Lieut.-Col. A. N. Worthington, Lieut.-Col. Grondin, Lieut.-Col. MacLaren, Lieut.-Col. Sponagle, Major Devine, Lieut. Col. J. A. Grant, Lieut.-Col. Johnson and Captain W. S. Hewetson, and secretary-treasurer, Lieutenant Theodore H. Leggatt, Ottawa. The next meeting will be held in Ottawa, Feb. 26, 1908.

Personal.—Dr. J. Alexander Gunn has been appointed medical superintendent of the Winnipeg Hospital, vice Alexander M. Campbell.——Dr. Oswald M. Jones, Victoria, B. C., has returned from an extended tour of Europe.——Dr. A. W. Gifford, London, has been appointed resident surgeon at the London Asylum for the Insane, vice Dr. George McNeill, resigned.——Drs. George A. B. Addy and Walter W. White, St. John, N. B., have returned from Europe.——Dr. Ernest Dickson, Toronto, has been appointed second assistant resident physician at the Johns Hopkins Hospital, Baltimore.—Dr. A. E. Wilson, Montreal has been appointed surgeon on the S. S. *Empress of Ireland*, succeeding Dr. Winder, resigned.——Dr. McInnis, provincial secretary in Manitoba, is seriously ill with appendicitis.——Dr. William J. Robertson, Guelph, Ont., has been appointed superintendent of the Provincial Hospital for the Insane, London, the former superintendent, Dr. George A. MacCallum, having been transferred to the institution at Penetang.——Sir Charles Tupper, M.D., Bart, first president of the Canadian Medical Association in 1867, has just been made a privy councilor by King Edward.——Dr. Montizambert is in Seattle investigating plague conditions.——Dr. Ruddick has been appointed port physician at St. John, N. B.

FOREIGN.

Scientific Mission to German East Africa.—The Hamburg Institute for Ship and Tropical Diseases is sending Drs. Keysselitz and Mayer to German East Africa to study protozoan diseases in man and animals. Their headquarters are to be at Amani.

Contagion of Cancer?—It is stated in our exchanges that Dr. Roquette of Brussels, a prominent investigator in cancer research, has recently succumbed to cancer of the larynx. His assistant, Dr. Jakobs, died a year and a half ago from the same malignant disease of the larynx.

Esmarch Celebrates the Fiftieth Anniversary of His Accession to the Chair of Surgery.—Professor Esmarch will be 84 January 9, and although he retired from practice and from his professorship in 1899, his friends celebrated recently the fiftieth anniversary of his professional career. His work on "First Aid" has been translated into 27 languages.

Von Rosthorn Called to Vienna.—The professor of obstetrics and gynecology in the University of Heidelberg, Alfons von Rosthorn, has been appointed to the same chair at Vienna, with charge of the second obstetric-gynecologic clinic in the place of Chrobak, who has recently retired on reaching the age limit. Professor von Rosthorn was one of the foreign guests at the Boston session of the American Medical Association in 1906. He is a native Austrian, now just 50 years old.

Measures to Promote Physical Training in Italy.—A National Institute for Promotion of Physical Training has been organized at Rome, and its first work was to appoint committees in every province, with subcommittees, all working for the same end. In order to co-ordinate effort it has been decided to hold a general reunion of representatives of the committees and subcommittees at Rome next April, where ways and means will be discussed and organized effort decided.

Koch's Return to Berlin.—The *Deutsche med. Wochschr.* remarks that, at an age when other men are thinking of resting on their laurels, Robert Koch started for the heart of Africa to study sleeping sickness, and after a year and a half of indefatigable work, has now returned home. He believes that he has accomplished the aims of his mission, having learned the habits of the infecting *Glossina palpalis* and discovered the intermediate host of the trypanosome in the crocodile. The glossina is able to bite the crocodile between the scales, where the epidermis is thin. Extermination of the crocodiles thus becomes one of the important features of the campaign against sleeping sickness. For months at a time Koch did not see a European except the physician who accompanied him, having spent most of his time on an island in Lake Victoria Nyanza. His final official report has not yet been published.

In Memory of Dr. Samuel Gache of Buenos Aires.—The officials connected with the sanitary service at Buenos Aires and numerous others have appealed to the municipal authorities for an appropriation for the family of the late Dr. Samuel Gache, stating that since 1887 he constantly performed various and numerous services for the city as physician to the Invalidos and Rawson Hospitals, member of the general hospital committee and of the public health board, for which he also served as secretary, member of the committee in charge of the public sanatoria and director of the Rawson Maternity, and was also on the editorial staff of the *Semana Medica*. He served with devotion and indefatigable zeal in these various positions, most of which were not remunerated, while his special training and intelligence rendered his services exceptionally valuable. The appeal states further that he has left his family in precarious circumstances, and an appropriation of $20,000 is asked for them as a memorial to his disinterested services for the public welfare.

Annual Meeting of the National Association of the Medical Press of Spain.—This meeting was held at Madrid in October with a large and enthusiastic attendance; the number of medical periodicals in Spain is comparatively large. Papers were read on the "Education of the Medical Journalist;" "Donation of Medical Journals to Medical Colleges and Associations;" "Practical Means to Draw into Closer Relations the Specialist and General Medical Journals;" "Advisability of a Mutual Exchange Between Medical Journals of Confidential Notices in Regard to Defaulting Subscribers and Advertisers, and Persons Who Send for Pamphlets, etc., and Fail to Pay for Them," and "Limits of Intervention of Scientific Writers in the Lay Press on Behalf of Medical Interests and Scientific Accuracy." Other articles read related to quackery and quack advertisements, and the question was discussed whether the authorities should not be requested to forbid the entrance into the country of the free foreign "house journals" and pseudo-medical journals, which, besides injuring the national medical press, affect injuriously also the pharmacy of the country and the allied industries. The report of the meeting in the *Siglo Medico* for October 19 does not state what resolutions, if any, were adopted on the above questions.

Successful Stand by Organized Physicians in Austria.—The Journal, March 10, 1906, described the "passive resistance" of the physicians throughout Austria outside of the large cities. It was a protest against the inadequate remuneration they were receiving for public vaccination and other semi-official duties. The combination of the physicians throughout the land for this "passive resistance" was a remarkable example of prompt and thorough organization, although it was practically the first attempt in Austria. The German *Leipziger Verband* reached over the border and gave about $5,000 toward the movement, and the physicians in Vienna also gave moral and financial support. One of the measures adopted was that the resisting physicians reported every case of infectious disease as "suspicious of scarlet fever," or "of diphtheria," etc., instead of waiting to be measurably sure of the diagnosis before reporting. This threw extra work on the health officers whose duty it is to examine cases of suspected infectious disease. The demands of the resisting physicians were generally sustained by the populace at large, and the legislators have finally acceded to all their demands, the sessions in October consummating the action taken, increasing the remuneration, creating an old-age pension and otherwise conforming to their demands after the "passive resistance" had lasted over a year and a half. In a number of localities the local authorities had guaranteed the physicians' remuneration while waiting for legislative action.

Public Meeting of the German Society for Repression of Venereal Diseases.—The first public meeting of this season was held at Berlin, October 11, when O. Rosenthal delivered an address on "The Inheritance of Syphilis and Its Social Dangers." He portrayed the dangers of syphilis for the mother and child, and the way in which it decimates families or deteriorates the offspring mentally and physically. It not only destroys the family home happiness, he said, and that of the individual, but is also a menace to society from the degeneracy of the later generations. A further and still too little regarded danger is that of infection of others by syphilis. Parents, brothers and sisters, schoolmates, fellow-workmen and others are constantly exposed to danger of infection from them. The greatest danger of infection is that incurred by wet-nurses or by infants given to syphilitic wet-nurses. He added that the warfare against tuberculosis has been taken up all along the line, in Germany, at least, but comparatively nothing has been done in regard to syphilis. He urged the foundation of special homes for children with inherited syphilitic taint, and the authorities of Berlin have already heeded his appeal so that an institution of the kind is now planned.

LONDON LETTER.

(From Our Regular Correspondent.)

London, Nov. 9, 1907.

Scientific Investigation of Alcohol.

The National League has arranged a series of scientific researches into the action of alcohol on mental and muscular efficiency and on the blood in relation to its power to resist disease. For the application of these tests improved apparatus has been devised. These investigations have been arranged by a committee of the league, consisting of the following members of the profession, well known for advocacy of teetotalism: Sir T. Barlow, Sir Victor Horsley, Prof. William Carter, Prof. Sims Woodhead, Dr. Claye Shaw, Dr. Robert Jones, Mr. Pearce Gould, Mr. McAdam Eccles and Surgeon-General Evatt. A student of St. John's College, Cambridge, who is preparing for the M.B. degree, has been subsidized to do the work under the general supervision of Dr. Rivers. He will test the muscular and mental work of subjects taking alcohol in a disguised form.

The Necessity for Employing Professional Anesthetists in Hospitals when the Administration is Difficult.

An inquest on a patient who died in Guy's Hospital under chloroform has attracted considerable attention and seems likely to alter the practice of allowing house surgeons to administer anesthetics in difficult cases. A woman, aged 29, suffered from exophthalmic goiter, for which Mr. Symonds proposed to remove a portion of the gland. There are eight professional anesthetists, four senior and four junior, to the hospital, who attend in rotation on operating days, but in cases of emergency the house surgeons administer the anesthetic, and indeed the major part of the anesthetics are given by them. Under chloroform administered by a house surgeon the thyroid arteries were tied as a preliminary operation. Three weeks later chloroform was administered by another house surgeon for the purpose of completing the operation. Soon after the operation was commenced the patient retched and brought up an ounce or two of fluid, the heart stopped beating and the usual

methods of resuscitation were attempted without success. In examination by the coroner the house surgeon stated that before he became qualified he had acted as anesthetist's clerk and administered anesthetics between forty and fifty times under the superintendence of the hospital anesthetists. He had also attended four lectures on the administration of anesthetics. Since he had been house surgeon he had administered anesthetics in ninety-eight cases. The hospital pathologist deposed that he had made a necropsy and found that the thyroid gland weighed 7 ounces instead of the normal ½ to 1 ounce. The thymus gland weighed over 3 ounces and should have been absent. The heart was fatty and heart failure was the cause of death. Mr. Symonds was submitted to a long examination by the coroner. In reply to the question whether he assumed responsibility for the anesthetization he said that he took partial responsibility. He is always present in the early stages of anesthetization, particularly in exophthalmic goiter which gave rise to anxiety. He always advises the anesthetist as to the depth of the anesthetization. Throughout the operation he always gave "half an eye" to the anesthetization. Giving an anesthetic, the coroner said, is dangerous in an operation for exophthalmic goiter. Is it wise to entrust the administration of chloroform to an administrator of comparatively little experience? Mr. Symonds said that he would not hesitate to do so again because he always shares in the supervision of the anesthetization. When asked why one of the staff anesthetists was not employed to administer the chloroform he said: "Because the operation took place on a Thursday, a day on which none attended." He was then asked if he agreed with the report of the anesthetics committee of the British Medical Association that "by far the most important factor in the safe administration of an anesthetic is the experience of the administrator," he replied: "The more expert a man is the more valuable he is. We could not carry on our hospital in that way." The coroner then quoted from the book of Sir Frederick Hewitt, anesthetist to the king, the statement that it is a great mistake that an operator should be in any way responsible and that the anesthetist should alone be responsible for the anesthetic. He also quoted: "Another reform needed is the appointment within our hospitals of an adequate number of officers for the special administration of anesthetics. Every anesthetic should be given by an officer appointed for the purpose." "The only reply I will make to that," said Mr. Symonds, "is the greater the experience the more valuable the man. Without giving an address on the subject it is impossible to answer more." The jury returned a verdict of "Death from misadventure due to the administration of chloroform." But they added a rider, at the suggestion of the coroner, "that in all operative cases of a serious nature anesthetics should be administered either by a staff anesthetist or by a resident, under his immediate supervision;" and that "complete statistical tables as to anesthetics should be kept by the authorities of Guy's Hospital." The coroner had complained that there were none such. The jury also found that no blame attached to the administrator. The *Lancet* supports the view that some reform is necessary and thinks that a weight of responsibility should not be imposed on "young and inexperienced shoulders which they can hardly bear." No resident anesthetist of the kind recommended exists in any of the hospitals of Great Britain. It seems highly probable that some change of procedure in the direction recommended will be made.

An Antivivisection Hospital.

The administrators of the Metropolitan Hospital Sunday Fund have refused a grant to the "National Antivivisection Hospital" at Battersea, on the grounds "that it does not comply with those general conditions which they considered should govern any hospital designed for the best reform of relief for the sick poor." On being requested for a further explanation by the hospital, the secretary of the fund wrote: "The distribution committee understand that your medical officers are forbidden to make use of some forms of treatment which, in the opinion of the highest authorities in medicine in all parts of the civilized world, have been proved to possess curative powers. The Hospital Sunday Fund can in no case assist institutions whose governing body dictates the form of treatment to be used by its medical staff." However, the sympathy with and support which all sorts of strange and unorthodox views receive in this country is brought into evidence by this financial boycott. It was plausibly represented to the public that the reason why a grant was refused was that the hospital did not permit its medical staff to practice experimental surgery on the patients or on animals. The mayor and other prominent authorities of Battersea, therefore, organized a huge picturesque carnival which received so much popular support that it is alleged that the hospital has gained instead of losing by the refusal of a grant.

Physician Fined for Refusing to Sign Death Certificates.

An unusual case has occurred at Barnes, a London suburb. In Great Britain it is almost invariably left to the discretion of the physician whether he will sign a certificate of the cause of death or not. If he entertains any doubt as to whether or not death was due to natural causes, he reports the case to the coroner, who has an inquiry made, and, if he thinks fit, orders an inquest, or communicates with the physician and informs him that he does not think an inquest necessary. The physician then gives a certificate, stating the cause of death to the best of his belief. In the case in question, a physician attended a woman who gave birth to triplets who survived birth an hour. The physician declined to give a certificate on the ground that he was not sure as to the cause of death. He was prosecuted for his refusal, and it was alleged that he refused a certificate because he wanted an inquest to be held on the children, for which he would receive fees amounting to $30. He was fined $10 and costs amounting to $35.

The Flood of New Drugs.

It is beginning to be understood by the medical man and in a lesser degree by the ordinary individual that the flood of new drugs which flows with ever-increasing volume constitutes a danger even when acknowledging that a useful drug is sometimes brought forward. It is true in England and probably to an even greater extent in America, that there are physicians who at once use new preparations which are put up in a convenient form and bear an attractive label. As a rule, unless a remedy has been tested in a hospital, a healthy skepticism as to its value is the surest safeguard, for the patient as well as the physician, against harm caused by new remedies. It is a curious tendency of the age that, while the best physicians prescribe fewer remedies than ever, the public swallow omnivorously drugs of all kinds, often with disastrous results.

Opening of the New Block of St. Bartholomew's Hospital.

The new block for out-patients at St. Bartholomew's Hospital, the foundation stone of which was laid by King Edward in 1904, has been formally opened by the Prince of Wales, president of the hospital. The new building is equipped in the most modern fashion. There is a large receiving hall measuring 140 by 46 feet, lighted from above and seating 850 people. The doors are so arranged as to afford facilities for separating male from female patients and medical from surgical cases. There is a desk for the almoner who inquires into the circumstances of patients near the entrance in order to prevent abuse of charity. The hall is surrounded by 23 rooms for the reception and treatment of casualty patients. A separate entrance near the street leads to two accident rooms in which accident and urgent cases are received at any time, without interference with the general work of the hall. Convenient passages lead to and from the dispensary and the whole floor is supplied with warmed and filtered air driven in by large electric fans, while each room has windows opening externally. The basement contains pharmaceutical laboratories, boilers for heating purposes, motors for the ventilating apparatus, and bathrooms for medicated and vapor baths and douches. The upper floors, four in number, are accessible both by staircase and elevator, and contain the general medical and surgical outpatient departments. The special departments are supplied with every possible facility for the conduct of the examinations and for the application of treatment. The first floor contains eight casualty beds for "one-night cases." On the fourth floor is a theater for the delivery of clinical lectures. The nursing arrangements are under the control of a sister who has rooms in the building and a staff of twenty-one nurses. Nearly all the internal walls are lined with glazed tiles and the floors are laid with terazzo and granolith.

The Poor Man's Sanatorium.

At a spot near Clacton-on-Sea, Dr. J. E. Chapman is conducting a novel form of sanatorium—a combination sanatorium and market garden. Starting with the idea that gardening is an excellent occupation for consumptives, he founded this establishment to enable those unable to pay for prolonged treatment partly or even entirely to support themselves. The charge for admission to the sanatorium is only $5 a week. As soon as the patient has progressed sufficiently, he is put to work in the garden, where he can qualify himself to remain at a charge of $3 a week. All the work he does is measured and paid for strictly according to its value. The patient can gradually increase the amount of work, and not only pay for his treatment, but render himself more fit to return to his former occupation than under the ordinary sanatorium system.

Therapeutics

[It is the purpose of this department to outline an up-to-date management of disease, to suggest scientific treatment for diseased conditions, and to present prescriptions that are simple, useful and palatable. Prescriptions are written in both the metric and apothecaries' systems, but the amounts of the ingredients are NOT exact translations of one system into the other, but quantities convenient for pharmacist and physician. It should be understood that solids are weighed in grams or fractions of grams, while liquids are measured in cubic centimeters; that a teaspoon holds five cubic centimeters, i. e., more than a fluid dram, hence a 100 cubic centimeter preparation will contain twenty doses.]

Anal Fissure.

Fissure of the anus may be healed by the application of the following ointment:

℞.	gm.		
Plumbi acetatis	50		
Zinci oxidi	50	or	āā gr. x
Calaminæ preparatæ (U. S. P. 1850)	1		gr. xx
Adipis benzoinati	ad 15		ʒss

M. et sig.: Apply frequently.

—*Medical Record*, Oct. 5, 1907.

Gonorrheal Epididymitis.

In the *New York Med. Jour.*, July 27 and Aug. 3, 1907, appear several articles on this subject. Following are the recommendations made by several writers:

Dr. J. J. Valentine, New York, states that gonorrheal patients who have been treated by irrigations rarely acquire epididymitis. Epididymitis having begun, he finds galvanism promptly arrests the pain, and that the swelling soon subsides. He places the patient's buttocks on a large, flat electrode, while the other electrode is large enough and curved to fit the scrotum on the affected side. At the first seance this last electrode is attached to the negative pole and a constant current of two milliamperes is applied for two minutes. At the second sitting he applies the positive pole to the scrotum with three milliamperes' strength for three minutes. He thus changes the direction of the current each day, increasing the strength one milliampere a day and the length of the seance by one minute each day. This frequency is continued until all pain has disappeared and the swelling has ceased to increase. After this the intervals between the treatments are made one and, later, two days.

The following local application is valuable:

℞.	gm.		
Ichthyolis	2		ʒss
Guaiacolis	5		ʒi
Unguenti hydrargyri	10	or	
Petrolati	10		
Adipis lanæ hydrosi	10		āā ʒiiss

M. et sig.: "Spread on four layers of gauze cut of sufficient size to cover completely the epididymis and the side of the scrotum involved. Over the gauze place a layer of cotton, then a sheet of oil silk, and finally a suspensory bandage to hold all in place and the parts well elevated."

Valentine says that painting the scrotum with nitrate of silver, tincture of iodin, or guaiacol have all been discarded on account of causing pain, with but little benefit.

He would abstain entirely from the use of ice, believing that it can cause sloughing of the epididymis or testicle.

He believes that the flaxseed and tobacco poultice may still have its use in the treatment of this condition. "The poultice is made by taking equal parts of ground flaxseed and common smoking tobacco and boiling them together to a thick porridge." This is then spread on a large layer of gauze and is ready for application and should be used hot. It is very important in all treatments, and especially in the poultice treatment, that the testicles are well elevated and supported from below so as to ease the spermatic cord. He cautions against allowing these poultices to become cold or the parts to get chilled while the poultices are being changed. Also, if the poultice is applied during the day the above ointment should be substituted at night.

In some instances heat is not well borne, and he would then use a lead and opium wash, applied at the temperature of the room. This may be ordered as follows:

℞.	c.c.		
Tincturæ opii	50		fʒiss
Liquoris plumbi subacetatis	20	or	fʒss
Aquæ ad	200		ad fʒvi

M. et sig.: For external use.

Several layers of gauze are saturated with the solution, either cold or warmed, and applied to the inflamed testicle, changing when the gauze becomes dry.

Some skins do not stand lead washes well, even in weak solutions, hence if there is any inflammation of the skin the solution should be much diluted.

When the inflammation of the epididymis is confined to its lower third and has not extended to the spermatic cord, Valentine finds that strapping it causes the pain to cease and the swelling to be reduced.

The use of adhesive plasters in this position, while perhaps successful, is certainly very painful of removal even if the hair is well clipped; consequently it is better to cover the parts with gauze before strapping.

Acupuncture has been used to reduce an intense edema.

Dr. F. E. Gardner, New York, in his article on the treatment of this condition, emphasizes the management as follows: First, absolute rest in bed, with an icebag to the scrotum and the groin, a piece of thick flannel being placed between the ice-bag and the skin to prevent too violent refrigeration. All local treatment of the urethritis present should cease, i. e., stop all injections. He gives a saline laxative every morning as represented by a teaspoonful of Rochelle or Epsom salts, insisting that the stools should not be hard when passed on account of irritation of the probably inflamed prostate. The diet should be liquid, and the nearer milk and cereals the better. If the pain in the pelvic region is severe he recommends at night an enema of from one to one and one-half ounces of lukewarm water to which had been added 0.5 c.c. (or 10 minims) of tincture of opium.

Internally he administers the following:

℞.	gm. or c.c.		
Potassii bicarbonatis	10		ʒiii
Tincturæ pulsatillæ	2	or	m xxx
Tincturæ hyoscyami	5		fʒi
Infusi tritici repentis, ad	100		ad fʒiv

M. et sig.: A teaspoonful, in water, every hour.

We can not but agree with Dr. Gardner that every patient with epididymitis should go to bed. To walk about with this condition tends to increase pain, cause temperature, and, if not finally compelling the patient to go to bed, causes the inflammation to be protracted.

Gardner believes that if the case must be ambulatory, guaiacol is the best treatment. It may be applied as follows:

℞.	c.c.		
Guaiacolis	20	or	ʒss

Sig.: Apply from ten to fifteen drops on the scrotum over the inflamed epididymis.

Or:

℞.	c.c.		
Guaiacolis		or	
Olei olivæ, āā	25		āā ʒi

M. et sig.: Paint a teaspoonful over the inflamed region.

After the first burning sensation disappears from the application, the scrotum should be covered with oil silk, then with a thick layer of absorbent cotton, and the whole held in place

by a suspensory bandage. One application of the guaiacol is generally sufficient. After the application of the above strength guaiacol solutions, the epidermis will generally peel off. If such active applications are not desired, a solution of from 10 to 25 per cent. guaiacol in olive oil may be used, and this may be applied several times.

Ichthyol solutions are often satisfactory applications for epididymitis, as the following:

R.	c.c.		
Ichthyolis	10	or	f℥iiss
Olei olivæ	ad 100		ad f℥iii

M. et sig.: Apply freely on gauze.

After the symptoms of inflammation have subsided and the swelling has very much abated, although it may not for a long time entirely disappear, the local treatment of the urethritis may be again commenced.

Dr. A. C. Matthews, Earlville, N. Y., also emphasizes the necessity for rest in bed and for proper support of the testicles and suggests placing a small pillow between the thighs for that purpose. A broad bandage properly applied around the thighs will successfully support the testicle. He also believes in the use of ice unless the patient is debilitated. He has the ice finely crushed and put into an icebag, and also speaks highly of the use of a small ice coil. If the patient is weak and debilitated, however, he believes that hot applications are better, and he applies simply hot water by means of spongiopilin wrung out and then applied closely and covered with oil silk. He finds these applications of hot water superior to tobacco and flaxseed meal. He advises, if pain is complained of during the cold applications, that they be intermitted from time to time, but believes that if they are to be successful they should be continued until all acute symptoms are past.

Matthews also advises Epsom salt for the bowels, and gives it as follows:

R.	gm.		
Magnesii sulphatis	15	or	℥ss
Antimonii et potassii tartratis	065		gr. i

M. et fac chartulas 4.

Sig.: Take a powder dissolved in half a glass of hot water every four hours until the bowels move freely.

He also emphasizes the necessity for cessation of all urethral medication, and of the importance of a liquid non-stimulating diet.

If the pain is severe and does not readily cease, Matthews makes several punctures in the epididymis with a large-sized needle or a finely pointed knife. The oozing of blood and serum that follows the punctures causes great relief.

Another method for relieving this testicular pain is to apply to the testicles the following:

R.	gm.		
Extracti belladonnæ foliorum		or	
Glycerini, āā	50		āā ℥i

M. et sig.: Apply thickly over the inflamed testicle; then cover with hot fomentations.

"The fomentations should be changed every hour. The belladonna and glycerin every 24 hours. This treatment usually relieves the pain and congestion in from 48 to 72 hours."

[It would seem that there might be some danger from belladonna poisoning from the use of the hot fomentations on top of the belladonna, especially if there should be belladonna idiosyncrasy.—ED.]

The pain having ceased, Matthews says that the patient may sit up provided he wears a well-fitting suspensory. However, it is better that he remain in bed for from a week to ten days, and about the fourth or fifth day Matthews finds it advisable to massage the epididymis gently with ointment of belladonna morning and night.

If the induration and enlargement of the epididymis persists he uses the unguentum hydrargyri with good effect.

Matthews makes the very trite remark that it is quite possible that neglect of some cautionary advice or the too frequent use, or the use of too strong medicaments, in the urethra may be the cause of the epididymitis, which develops in from the third to the fourth week of the gonorrhea.

Dr. J. M. Edwards, Mankato, Minn., writing in the *New York Med. Jour.*, August 3, on the same subject, besides advocating the above treatments suggested, believes that after the acute inflammation has ceased the hot sitz bath from one-half to three-quarters of an hour daily is of advantage. As soon as the patient is about he finds the "jock" strap the best suspensory. He thinks that a patient should rarely resume his work until after ten days, and not at that time unless it is not laborious. With such rest and careful convalescence relapses will rarely occur.

Edwards advises treating the left-over induration of any part of the epididymis by applications of iodin or of belladonna and mercury ointments equal parts.

R.	gm.		
Unguenti belladonnæ		or	
Unguenti hydrargyri, āā	15		āā ℥ss

M. et sig.: Apply locally as directed.

[While using this ointment the patient should be carefully watched for local symptoms of irritation from the mercury ointment and for systemic symptoms from too much absorption of both mercury and belladonna.—ED.]

Dr. Theodore Bliss, Schenectady, N. Y., writing on the same subject, emphasizes the same care in the management of the case; he also gives santal oil.

R.

Capsules olei santali flexibiles, āā, m. x.

No. 20.

Sig.: A capsule, with plenty of water, every four hours.

If there is much pain which is not relieved by the local treatment, he advises giving codein and acetphenetidinum, as:

R.	gm.		
Codeinæ sulphatis	15	or	gr. iiss
Acetphenetidini	3		gr. L.

M. et fac capsulas 10.

Sig.: A capsule every two hours, if needed.

In making hot water applications to the testicles he advises the addition of 1 or 2 per cent. of phenol, evidently believing that he gets more sedative action out of such applications.

When the acute pain and tenderness has passed he advises the use of a piece of elastic fitted firmly about the scrotum, as it will follow the subsidence of the swelling.

If induration continues he advises the use of the thermocautery.

Bliss allows the patient to be up and about as soon as he can stand five minutes without a return of the pain in the groin or testicle. He believes the average case lasts a week, with a stay of five days in bed.

If the epididymitis is severe he believes the testicle itself becomes inflamed and orchitis is the result, with the future danger of partial sterility.

Dr. G. I. Jones, Washington, D. C., adds to the above suggestions for the treatment of this inflammation the administration of hexamethylenamina as a urinary antiseptic.

R.	gm.	
Hexamethylenaminæ	6	3iss

Fac capsulas 20.

Sig.: A powder dissolved in half a glass of water three times a day.

Jones finds that the recovery of the inflammatory indura-

tion is hastened after the acute symptoms have passed by the use of the following:

R.	gm.		
Pulveris opii	25		gr. iv
Unguenti belladonnæ	15	or	ʒss
Unguenti ichthyolis (25 per cent.)	ad 50		ad ʒii

M. et sig.: Apply with gentle friction three times daily.

It is, of course, understood that if abscess formation occurs in the epididymis or testicle and pus is diagnosed, it must be freely evacuated.

Pharmacology

[Contribution from the Chemical Laboratory of the American Medical Association.]

URICEDIN.

W. A. Puckner and A. H. Clark.

In view of the interesting report given below concerning investigations of Uricedin made by F. Zernik in the Pharmaceutical Institute of the University of Berlin, and because this preparation is being advertised to physicians in this country, its examination was taken up in the Association laboratory to determine the composition of the product as sold here. The following is a translation of the Zernik report from the "*Arbeiten aus dem Pharmaceutischen Institut der Universitat Berlin, dritter Band*," 1906, and is given to show how this remedy has varied in its composition as put on the market in Germany.

Uricedin (Stroschein).

BY F. ZERNIK.

Uricedin is made by the firm of manufacturers of chemical preparations, J. E. Stroschein, Berlin.

1. This powder, recommended for the treatment of the uric acid diathesis, appeared first in 1893. According to the statements of the manufacturers, it was produced in the following manner: "In lemon juice freshly expressed and clarified and purified according to the process announced for the patent the amount of citric acid is quantitatively determined and to the juice are added 50 parts of anhydrous citric acid, 20 parts of the purest sulphuric acid containing 95 per cent. H_2SO_4 and 4 parts of the purest hydrochloric acid of 25 per cent. and then the purest sodium carbonate until the mixture shows only a faint acid reaction. In addition 1 part of lithium carbonate is dissolved in sufficient of the lemon juice for exact neutralization and this solution is mixed with the first and the whole completely dried and granulated. The preparation contains:

27.5 parts of	Na_2SO_4
1.6 parts of	NaCl
67.0 parts of	$Na_3C_6H_5O_7$
1.9 parts of	$Li_3C_6H_5O_7$."

2. According to an analysis by Goldmann, Uricedin consisted of:

31.9 parts of	Na_2SO_4
1.6 parts of	NaCl
6.2 parts of	Na_2CO_3
59.1 parts of	$Na_3C_6H_5O_7$
1.6 parts of	H_2O

A second preparation was found by Goldmann to have a strong acid reaction.

3. A sample of Uricedin investigated by Schneider at the same time had an alkaline reaction and contained sodium carbonate as well as lithium.

4. According to later reports the Uricedin produced by the use of fresh lemon juice contains sodium citrate 62.7 per cent., sodium sulphate 29.694, sodium chlorid 1.266, sodium acetate 1.320, sodium tartrate 1.500, sodium malate 1.550, iron 0.040, sodium pectinate 1.170, extractive material 0.820.

The preparation used for examination was in an intact original package. The blue octagonal bottle, closed with a metal screw cap, contained about 135 grams of a yellowish-white, granulated powder of a salty taste that dissolved in water to a turbid liquid of acid reaction. Sodium, sulphuric acid, citric acid, chlorin, tartaric acid and traces of iron could be detected in it, but neither lithium, acetic acid, nor malic acid. From the results of the quantitative analysis Uricedin contains about 2.5 per cent. of sodium chlorid and 66.5 per cent. of anhydrous sodium sulphate; the remainder consists of sodium citrate and a little sodium tartrate.

As a comparison of the results of the present examination with the previous analyses shows, the composition of Uricedin seems to vary.

The Fischer Chemical Importing Company of New York is the American agent. The product is sold in blue, screw-cap bottles, each containing the name "Uricedin-Stroschein" blown in the glass. In the literature distributed by the American agents appears the following statement:

"This remedy is not a 'patent medicine,' as might appear from the name that has been adopted for it. The preparation is a definite chemical compound of unvarying composition, consisting of citrate of sodium, sulphate of sodium, chlorate of sodium, acetate of sodium, tartrate of sodium, pomate of sodium, limonin, etc., in definite proportions. The preparation is produced by a special chemical process through the action of purest sulphuric and hydrochloric acids and carbonate of sodium on true citric acid from the lemon fruit."

From our analysis[1] we conclude that the composition of Uricedin as now found on the American market is approximately:

Sodium sulphate (anhydrous)	61.52 per cent.
Sodium citrate (anhydrous)	29.62 per cent.
Sodium chlorid	2.13 per cent.
Citric acid (anhydrous)	3.25 per cent.
Moisture	2.53 per cent.
Undetermined	0.95 per cent.
	100.00

Uricedin, therefore, is not a definite chemical compound as claimed, but a simple mixture which consists essentially of sodium sulphate (dried Glauber salt) 2/3, and sodium citrate 1/3.

Comment.

It is evident from the analyses that this product is a typical nostrum, in addition to which it would seem that the composition is changed from time to time to suit the whim of the manufacturer. The claim is made by the manufacturer that this product is a definite chemical compound, when, in reality, it is simply a mixture. This well-known device of nostrum manufacturers has been exposed so often that it is becoming an old story—and a disgraceful one.

The therapeutic claims made for this nostrum are of the same extravagant nature. For instance, a recent advertisement states that it is "used successfully for Gouty Diathesis, Urinary Calculi, Rheumatoid Arthritis," "useful in Migraine, Occipital Headache, Epilepsy, Hay Fever, Asthma, Nasal Catarrh, Hysteria, Neurasthenia, Eczema, and certain functional disturbances of the sexual organs." Who would have believed that such wonderful therapeutic effects could ever be obtained by the administration of Glauber salt and sodium citrate. If a simple mixture of this sort will do all the promoters claim Uricedin will do, then in the name of suffering humanity let us use it, but at the same time, in the name of

1. Analysis of Uricedin: An original bottle of Uricedin was purchased. The contents of the package consisted of a white granular powder, odorless, of a bitterish salty taste, soluble in water, the solution being acid in reaction.

The analysis of Uricedin presented no great difficulties or points of interest. The presence of sodium and absence of all other metals was shown by the usual tests. The presence of an acetate or tartrate could not be proved by any test; neither these nor sodium formate can be present except in insignificant quantities since the analysis accounts for 99 per cent. by direct estimations.

Sodium: Sodium was estimated by ignition with sulphuric acid. The average of the estimations indicated 21.41 per cent. sodium.

Citrate: Citrate was estimated by determining the alkalinity of the residue after ignition. To guard against the possibility of sulphid having been formed in the ignition, neutral hydrogen dioxid solution was added and the liquid allowed to stand one-half hour before titrating. The average of the titrations indicated 21.69 per cent. of citrate, $(C_6H_5O_7)'''$.

Sulphate: Sulphate was determined as barium sulphate with the usual precautions. The average of the estimations indicated 41.57 per cent. $(SO_4)''$.

Chlorid: Estimated gravimetrically an average of 1.29 per cent. Cl' was found.

Free Acid: Determination of free acid by titration with tenth normal alkali using phenolphthalein as indicator, calculated to citric acid (anhydrous), indicates 3.25 per cent.

common decency, let us prescribe its ingredients by their proper names, knowing what we are giving our patients. The ingredients for such a mixture would cost not to exceed 50 cents a pound, while this wonderful remedy is listed at $1.25, wholesale, per bottle of about 5 ounces. Surely if this combination will do what its promoters claim for it, it is an act of philanthropy to put it within the reach of the poorest patient. Finally, if we must prescribe nostrums, let us at least be patriotic and confine ourselves to home-made fakes, of which there is surely no lack at the present time.

Nostrum Advertisements in Official Organs of Fraternal Societies.

While the official organs of fraternal organizations have not been as lax in their supervision of advertising matter as have the religious papers, many of them have been, and still are, open to serious criticism. Dr. J. W. Robinson, Mackay, Idaho, took occasion to call the attention of the editor of the *Modern Woodman* (the official organ of the Modern Woodmen of America) to the nature of some of the advertisements carried in this, the official, journal of the organization to which he belongs. The editor, in a courteous reply to Dr. Robinson, said, in part:

> It affords me pleasure to report that at the September session of the executive council I recommended that the manager of advertising be instructed to make no new contracts with advertisers of "patent medicines," and that all existing contracts be canceled, to take effect not later than the issue for December, 1907. The executive council unanimously adopted my recommendation. After December, therefore, there will be no "patent medicine" advertisements of any kind inserted in the official paper. If at any time any advertisement appears in the official paper which you know to be a fraud, or in any way objectionable, I will esteem it a favor if you will notify me.

This is one more example of what may be accomplished by the subscriber to any journal which carries objectionable advertisements, and it also exemplifies the fact that the majority of editors and business managers have an evident desire to place the editorial and advertising departments on the same ethical plane. It emphasizes the fact that it lies largely within the subscriber's power to determine the class of advertising he shall be obliged to read; this being so, it is plain to see where the responsibility lies.

Physicians and Pharmacists.

The recent banquet given by some Philadelphia pharmacists to the physicians of their district is an indication that the pharmacists are awake to the importance of bringing the two professions together. The idea of dining together is an excellent one, as the impression of fraternity and good fellowship thereby produced is likely to be lasting even if the fine speeches made by the after-dinner speakers are forgotten. Physicians and pharmacists may thus come to know each other better and will be slower to credit the idea that the two occupations, whether regarded as trades or professions, are antagonistic.

"Patent Medicines" in British Columbia.

That our northern neighbors are fully awake to the need of reform in the use of proprietary and "patent medicines" is evidenced by the action taken at the eighth annual meeting of the British Columbia Medical Association held at Victoria, B. C., in August last. The following resolutions were passed and ordered transmitted to the Canadian Medical Association:

> WHEREAS, It is morally incumbent on every medical man to protect the public against disease and sickness as far as possible; and
> WHEREAS, The so-called "patent medicines" are sold without restriction throughout this province, thereby constituting a menace to the public health; and
> WHEREAS, Proprietary medicines, the composition of which are not known, are prescribed by regular physicians to a certain extent; therefore, be it
> *Resolved*, That the British Columbia Medical Association place itself on record as being in favor of the enactment of suitable laws for the protection of the public against "patent medicines;" and
> *Resolved*, That it appoint a committee whose duty it shall be to institute such measures, or support them if introduced by the legislature; and
> *Resolved*, That it strongly disapprove of the unscientific and possibly dangerous practice of prescribing the secret proprietary medicines; and
> *Resolved*, That the British Columbia Medical Council be requested to communicate with all physicians of the province, drawing their attention to the undesirability of prescribing these secret proprietary medicines.

The British Columbia Medical Association also asked that the Canadian Medical Association cooperate with it in getting the Dominion Government to take action in this matter.

Correspondence

"Spontaneous Arterial Degeneration in Rabbits."

CHICAGO, Nov. 7, 1907.

To the Editor:—In THE JOURNAL, Oct. 5, 1907, is an article by Dr. Miles and an editorial on the above subject. The suggestion is made in these articles that the various experimental vascular changes that have been produced during the past four years may be in reality of spontaneous origin. Jores' exhaustive dissertations on arteriosclerosis which appeared just previous to Josué's successful experimental work, reviews the various attempts to produce arterial changes in animals and especially in rabbits, and the total number of animals carefully examined must have been large and yet in not one of these were they able to detect vascular changes. In 1900 Crofton reported atheroma in two rabbits as a result of injections with hypoxanthin. Fisher, while working with adrenalin arteriosclerosis, reports that in some poorly nourished animals he found slight spontaneous changes resembling those produced by adrenalin. Ophüls, also, recently reported spontaneous atheroma in one rabbit. Beyond this, so far as I have been able to determine, no one had detected changes of this sort until Dr. Miles and Dr. Johnstone in the report referred to. Reviewing the experimental work of the past few years, we find that there have been many unsuccessful attempts to produce arterial changes, as Adler's work with an infusion of tobacco, Josué with very small doses of nicotin, Lissauer with caffein, Jores with adrenalin by mouth, Erb by intraperitoneal injection of adrenalin, Josué, Kulbs and others by subcutaneous injections of adrenalin, although they all were able to produce degeneration by adrenalin intravenously. Kulbs and Ziegler each found arterial changes in every animal given adrenalin intravenously. Pearce and Stanton have described the process of healing that occurs after adrenalin has been discontinued. We have the 100 normal animals, examined by Loeb and referred to by Miles, in which no changes were found, and Meronescu's series of 300 normal rabbits without evidences of changes, although his adrenalin rabbits showed constant characteristic lesions. With this evidence it seems highly improbable that the experimental lesions could have been of spontaneous origin. Dr. Miles' report on the series of untreated animals and those receiving adrenalin subcutaneously is not conclusive, as all investigators agree that it is practically impossible to produce arterial changes by subcutaneous injections of adrenalin. The findings of Drs. Miles and Johnstone are extremely interesting, as they show that certain groups of rabbits are extremely liable to arterial changes. It would be very instructive to determine under what conditions these animals had been kept. That such spontaneous changes are general has not been proved, the weight of evidence being decidedly to the contrary. JOSEPH L. MILLER, M.D.

Triacol and the Alpers Chemical Company.

NEW YORK CITY, Nov. 4, 1907.

To the Editor:—About a year ago THE JOURNAL of the American Medical Association criticized the action of the Alpers Chemical Company for advertising its product, Triacol, in a number of magazines, and I was personally held responsible for such action. Neither the Alpers Chemical Company nor myself knew of this criticism until recently, when at the meeting of the American Pharmaceutical Association my attention was called to it. This is the reason for the long delay in correcting some erroneous statements made in THE JOURNAL. The advertisements in question were made through a misunderstanding between an advertising agent and an employé of the company who had temporary charge of these matters during the manager's absence in Europe. As soon as the error

was detected steps were taken to stop the respective advertisements and they have long ago disappeared from the magazines. While the Alpers Chemical Company regrets this error, due to an overzealous employé, it wishes to state most emphatically that no change of policy was ever contemplated, and that its product, Triacol, was, and always will be, a strictly ethical preparation, being recommended to the medical profession alone.

As to myself, I have not influenced the policy of the Alpers Chemical Company for years, and knew nothing of this whole matter till last September. The efforts of my professional life have largely been devoted to the advancement of ethical relations between medicine and pharmacy, and I have never for a moment changed my position.

William C. Alpers.

A Warning Not Heeded.

Dallas, Texas, Nov. 12, 1907.

To the Editor:—From the fact that there is in Texas a huge conspiracy against all young medical school I hereby warn you not to mention in any of your publications including the A. M. A. Journal any unfavorable mention of the College of Phys. & Surg., Dallas. Kindly refuse to mention this school in any till further notice. I warn you under penalty of the law. Arthur C. Bell, Dean.

[See page 1795, item headed "Texas Board Withdraws Recognition."—Ed.]

Association News

THE ARCHIVES OF INTERNAL MEDICINE.

Announcement of Publication.

At the Atlantic City session of the American Medical Association a petition signed by many clinicians was presented to the Board of Trustees, suggesting the publication of a journal devoted to scientific clinical medicine, and stating that there was no journal in the English language covering the field outlined. In response to this request the Board of Trustees at once appointed a committee, which reported to the Board at its October meeting, approving the proposal and outlining a general plan for such a publication. The Board adopted the report, and asked the following to act as the editorial board: Joseph L. Miller, Chicago; Richard C. Cabot, Boston; George Dock, Ann Arbor, Mich.; David L. Edsall, Philadelphia; Theodore C. Janeway, New York City, and W. S. Thayer, Baltimore. The tenure of office of the editors is to be six years, but they are so appointed that the term of one will expire each year.

The first number of the *Archives of Internal Medicine* will be issued about Jan. 15, 1908. Subsequent numbers will follow at intervals as material permits, but monthly issue is anticipated. Two volumes will be published annually, each to consist of not less than 600 pages. The *Archives* will contain no advertisements.

Mechanically and typographically, the *Archives of Internal Medicine* will be of the highest order, with special attention given to the reproduction of illustrations.

Authors who so desire will be given 250 complimentary reprints.

For the present the subscription price will be $4 a year—two volumes—or 50 cents a copy. As an introductory offer a reduction of one dollar will be made to members and subscribers to The Journal of the American Medical Association. It is very desirable that those who wish the *Archives* should send in their names—by postal card or letter—as early as is convenient, so that a general idea of the number to print may be obtained before Jan. 1, 1908. Address: "*Archives of Internal Medicine*, 103 Dearborn Avenue, Chicago, Ill."

Announcement by Editorial Board.

The increasing amount of scientific work in internal medicine in this country has led to the need of a journal devoted to the subject. We are glad to announce, therefore, that the Board of Trustees of the American Medical Association has taken steps for the founding of the *Archives of Internal Medicine*. It will be devoted to the publication of original studies on clinical medicine carried out at the bedside or in the laboratory, and of physiological, pathological and pharmacological researches that have a bearing on the nature, diagnosis or treatment of disease. Scholarly, thorough work, well abreast of the present position of medical science, is what is desired for the *Archives of Internal Medicine*. All technical details and protocols necessary to prove the thesis will be welcome, although unnecessary details are to be avoided. Articles that summarize what is already known on a certain topic and then add something new, represent the class of communications that are desired, as well as short original communications on matters relating to internal medicine. Articles which do not deal with internal medicine, but take up the purely technical or special problems of cognate branches of medicine, such as surgery, obstetrics, pathology, chemistry, physiology, etc., will not be considered appropriate. It is not intended that the *Archives* shall contain editorials or abstracts, but occasional analytical reviews of books and of important subjects will appear.

The undersigned desire the hearty cooperation of all those interested in scientific medicine in the United States.

All communications relating to the editorial part of the journal should be addressed to Dr. Joseph L. Miller, 100 State Street, Chicago. Respectfully,

Joseph L. Miller, David L. Edsall,
Richard C. Cabot, Theodore C. Janeway,
George Dock, W. S. Thayer,
Editorial Board.

Miscellany

THE GREAT AMERICAN FRAUD.

Nostrum Advertisements in the Religious Press—Influences for Reform.

In a recent issue of The Journal[1] we gave a rather full report of *Collier's* arraignment of the religious press for the character of the advertising it carried. In a later issue of the same magazine[2] Samuel Hopkins Adams discusses the influences for reform, foremost among which he places the clean religious papers. He says:

"The very fact that they maintain themselves without taking blood-money is at once an accusation against their less consistent compeers and a refutation of the plea that without the money of quackery a religious paper can not be self-supporting.

THE CHRISTIAN ADVOCATES.

"On this important point, here is testimony from the *Christian Advocate* of Nashville, Tenn. The *Christian Advocate* is under the general direction of the publishing house of the Methodist Episcopal Church. The editor, Rev. G. B. Winton, is made responsible for the advertising also, which is the proper and logical system, and has full powers to reject any objectionable matter. His rule is a simple one: 'That as far as possible advertisements of "patent medicines" be eliminated, and that if any are admitted they must be of articles free from narcotics, and an undue proportion of alcohol, and such as make no spurious claims as to what the medicines will accomplish.' Is the Nashville *Christian Advocate*, therefore, tottering on the brink of beggary? An inquiry from the management of the paper indicates the reverse:

"'At present, when we are more rigid in the scrutiny of advertising than ever before, and when we have three regular editors on our staff instead of two, as has been customary, the paper is self-sustaining.'

"Moreover, the Nashville *Christian Advocate* pays for its contributions, which few religious journals do. It would seem, therefore, to be, like its denominational brother, the New York *Christian Advocate*, an illustration of how an intelligent and

1. Aug. 10, 1907, 510-511.
2. Collier's, Oct. 12, 1907.

conscientious standard of advertising helps rather than hinders a religious paper.

"The *Record of Christian Work* believes that 'to have one standard of orthodoxy for the editorial columns, and another for the business management is nothing less than cant.' Hence, it contrives to get along without taking a percentage for swindling the sick and suffering. So does the *Christian Register*, organ of the Unitarian denomination, which 'has not inserted medical advertising for thirty years;' the *Universalist Leader*, which 'declines everything objectionable regardless of financial results;' the *Catholic Monitor* of San Francisco; the *Catholic Tidings* of Los Angeles, which holds that exploiting fraud is 'incompatible with the teaching of Mother Church;' the *American Hebrew*, which adheres to a policy of 'no medical advertisements accepted;' the *American Israelite*; the *Orthographic Review*, a sectarian publication in Indianapolis; the *Christian Herald*, one of the pioneer protestants against this class of chicanery; *Forward* and the *Westminster Teacher*, issued by the Presbyterian Board of Publication and Sabbath School Work, which 'never inserts medical advertising in our mediums;' the *Cumberland Presbyterian Banner* of Jasper, Tenn.; and, with perhaps an occasional slip through inadvertence in admitting some mildly fraudulent but harmless proprietaries, the *Congregationalist*, the *Presbyterian Standard* and the *Christian Guardian* (Methodist). The *Religious Telescope* of the United Brethren Publishing House is dropping all this class of patronage. 'We do not regard all medical advertisements as harmful,' writes the editor, 'but there seems to be no safe way to attempt a distinction.' *Zion's Herald* published in Boston, has made a distinction which is admirable if rigidly adhered to. 'Ordered: that after this date the publishing agent of Zion's Herald is instructed to decline all orders of advertisements of medicines that are composed in part of alcohol, opium, or other known harmful drugs; of advertisements that suggest disease or work on the imaginations of the readers for that purpose, and of advertisements that make promises of impossible cures.'

Unity (published in Chicago) 'does not know whether in the mind of *Collier's* it is a religious journal or not,' but in its thirty years of existence it has 'never wittingly yielded its columns to the pernicious advertiser, though it is not ignorant of the tempter and the force of the argument "that good may come of it."' A study of the columns of *Unity* indicates that it is indeed a religious journal all the way through and that it has no double standard—one set of ethics for the editorial part and another for the advertising. Indeed, a paper which announces conspicuously, 'We absolutely guarantee all advertisements herein,' is obviously concerned with ethics first and earnings afterward.

THE LUTHERAN PUBLICATIONS.

"For the credit of the Lutheran Church the Rev. J. H. Witte of Hannibal, Mo., comes forward with a statement that all the publications of the Missouri Synod are free of fraudulent medical matter, naming specifically *Der Lutheraner*, *Die Missionstaube*, *Kinder-und-Jugendblatt*, *The Young Lutheran's Magazine*, and the *Lutheran Witness*. The *Lutherische Kirchenzeitung* of Columbus, Ohio, has never carried medical advertisements. 'We are opposed to the whole business of pouring unknown drugs or fluids of doubtful character into people,' says the Rev. Mr. Lenski, the editor, 'and are using our influence against it. My church body would call me sharply to task if I took a different course.' It would hardly do to assume that the Lutherans, as a body, are of higher principle or clearer intelligence than other churches, but certainly it would seem that they have the ability, above most others, of making their publications represent the best qualities of their religion."

Mr. Adams then gives a summary of the excuses offered by the various editors whose journals he took to task. Most of these "excuses" do not excuse, a few seem based on the old theory: "No case; abuse plaintiff's attorney." Not all, however, try to evade the impeachment; one editor in particular acknowledging the need of reform.

ONE EDITOR'S PRINCIPLES.

"From paltering excuse and shuffling evasion, it is good to turn to the words of a religious editor who puts principle above profits. No writing of mine can sum up the essentials of the situation as does this extract from a letter of Frank Willis Barnett, editor and owner of the *Alabama Baptist*, published in Birmingham, a paper which has been full to reeking with fraudulent medical advertising.

"'I hope soon to have a clean bill of health. From personal experience I know that the man who publishes a denominational weekly has a hard, uphill fight to make both ends meet. I do not want to pose as heroic, but as sure as you live your articles make it mighty tight on the editors of religious papers. It is easy to say "Better that they went out of existence." But when you, or any other man, looks his bread and meat in the face, and sees the pone grow smaller and the cut littler, it is an effort to do right when one's stomach suffers. But, after all, if we believe what we preach and write, we must do the square thing ourselves, or how can we help others to win moral battles? I am glad that I live in an age when men are willing to make sacrifices and when the press is undertaking big reforms against powerful interests. It is no time in which to whine.' "

Summing up, Mr. Adams says, referring to the editor's letter given above: "Reverend gentlemen of the religious press, you who publish papers of power and influence, backed safely by the financial ability of your church organizations, whither you lead others will follow. If Mr. Barnett, sole owner of his struggling paper, with his whole career staked on his venture, can better afford to cleanse himself of the evil influences that have hitherto been the mainstay of his enterprise, can better afford to see the pone grow smaller and the cut littler, can better afford to be an honorable Christian from cover to cover of his publication than to compromise with the devil of quackery, can you afford to do otherwise?"

Book Notices

CHEMICAL PATHOLOGY. A Discussion of General Pathology from the Standpoint of the Chemical Processes Involved. By E. Gideon Wells, Ph.D., M.D., Assistant Professor of Pathology in the University of Chicago. Cloth. Pp. 549. Price, $3.25 net. Philadelphia: W. B. Saunders Company, 1907.

This book represents the first attempt in the English language to review in a systematic manner the chemical knowledge now at our disposal concerning the nature and manifestations of disease. The author has not hesitated to incorporate in the treatise the most widely separated aspects of the general subject. The following tabulation of the chapter headings will afford an idea of the ground covered in the book: Chemistry and Physics of the Cell; Enzymes; Chemistry of Bacteria and Their Products; Chemistry of Animal Parasites; Chemistry of Immunity and of the Reactions of Agglutination and Precipitation; Chemical Means of Defense Against Poisons of Known Composition; Phytotoxins and Zoötoxins; Hemolysis and Serum Cytotoxins; Inflammation; Disturbances of Circulation and Diseases of the Blood; Edema; Retrogressive Processes; Calcification, Concretions and Incrustations; Pigmentation; Chemistry of Tumors; Metabolism and Autointoxication; Gastrointestinal Autointoxication; Ductless Glands; Uric Acid Metabolism; Diabetes. These numerous, often intricate and most varied subjects are reviewed in a space of less than 600 pages; and considered from the standpoint of the number of subjects, the state of our knowledge and the limitations of space, the topics are well reviewed. The author is familiar with an enormous literature. He has for the most part clear ideas concerning both fundamental principles and concrete investigations. For the physician the book will prove a reliable guide. For the student of pathology as currently taught in this country, this book should afford an excellent antidote to the ultramorphologic point of view. As a guide to the trained student in research the book can not serve, and was not, indeed, designed to that end. No book that is spread over so large a domain with so few pages can hope to possess that sequence in development and objectivity in historical presentation that is essential in the guide to the student entering on research. This may be regarded as a very unspecific criticism; it is not intended, as a matter of fact, as a criticism at all; it is simply a statement of fact.

In the recital of investigations the author is not sufficiently critical; he does not make sufficient use of the collateral investigations in chemical biology and botany, and lastly, the book is not written from the standpoint of the physicist's theory of dimensions. There are two kinds of books in biology, as in physics and chemistry. The one kind is intended to serve as a general statement of what we know and is designed for the use of those who wish to inform themselves,

untrained in the subject, of the current state of knowledge. The second kind of book aims to teach the aspiring investigator the historical development, present state and future direction of the problems of science. This book belongs to the first class. As such it has a large field of usefulness, particularly in this country, where medicine is hidebound in morphology. It ought to be on the desk of every reading physician in this country, and it will be there if the members of the profession realize how safe and sane Dr. Wells is in his point of view of pathology.

Queries and Minor Notes

ANONYMOUS COMMUNICATIONS will not be noticed. Queries for this column must be accompanied by the writer's name and address, but the request of the writer not to publish name or address will be faithfully observed.

METRIC EQUIVALENT OF THE TEASPOON.

HANOVER, MASS, Nov. 1, 1907.

To the Editor:—While a student at Yale, I was taught to use the metric system and liked it very much. I was taught to consider 5 c.c. equal to a teaspoonful. Since I have been here have written my prescriptions as formerly taught and am told by the country druggist that 4 c.c. is a teaspoonful and not 5 c.c. I ask him his authority and he produces the *Dispensatory*, of which Dr. Hare of Pennsylvania is one of the editors. I write to Dr. Hare about the matter and his reply is as follows: Four c.c. equal one fluidram, therefore, 5 c.c. is wrong. Frequently I have noticed in THE JOURNAL in the department of Therapeutics, that "a teaspoonful holds 5 c.c." Whom am I to believe?

CHARLES HAMMOND.

ANSWER.—The United States Pharmacopeia has authorized the statement that a teaspoon holds approximately 4 c.c., and this has been accepted for a long time because the teaspoon used to be regarded as the equivalent of the fluidram. This was probably correct with the smaller teaspoons that were sometimes used. But as a rule the teaspoon has a larger capacity, and the rule that four teaspoonfuls make a tablespoonful is incorrect, the ratio being nearer 1 to 3 than 1 to 4. The capacity of spoons has been carefully investigated by M. I. Wilbert (proceedings of the American Pharmaceutical Association, 1905, liii, 391). He found that teaspoons evenly full have a capacity of from 4.6 to 5.5 cc. Dessertspoons will hold from 8.4 to 10.4 c.c., and tablespoons from 12.8 to 15.6 c.c. All spoons, if filled to their greatest capacity, will hold from 10 to 20 per cent. more than the quantities here given. It is fortunate that the capacity of the teaspoon is so nearly 5 c.c., for this unit lends itself very readily to calculations in the metric system. Thus 100 c.c. will give just 20 doses. For the purpose of prescribing, the teaspoon may be taken as holding 5 c.c., the dessertspoon 10 c.c., and the tablespoon 15 c.c.

CERVICAL RIB.

MUSKOGEE, I. T., Oct. 31, 1907.

To the Editor:—Some months ago there appeared in THE JOURNAL an article reporting a case of "Cervical Rib." Please inform me in what number I will find it. If you have any other literature on the subject, please refer me to it.

I. B. OLDHAM, M.D.

ANSWER.—The article desired was by Dr. Carl Beck in THE JOURNAL, June 17, 1905. Other literature on the subject is as follows:

"Cervical Rib, with Resulting Gangrene of Fingers," W. N. Babcock, *American Medicine*, Oct. 7, 1905.

"Cervical Ribs and Their Effects on the Great Vessels of the Neck," W. Broadbent, *British Medical Journal*, May 5, 1906.

"Diagnosis of Cervical Ribs," *Zeit. f. klin. Med.*, LX, 3-4, abstracted in THE JOURNAL, Dec. 1, 1906, p. 1862.

"Clinical Significance of the Cervical Rib," J. B. Murphy, *Surgery, Gynecology and Obstetrics*, October, 1906.

"Cervical Rib," C. K. Russel, *Medical Record*, Feb. 16, 1907; abstracted in THE JOURNAL, March 2, 1907, p. 832.

"Symptoms, Diagnosis and Treatment of Cervical Rib," W. W. Keen, *Amer. Jour. Med. Sciences*, February, 1907; abstracted in THE JOURNAL, March 16, 1907, p. 976.

Editorial in THE JOURNAL, March 9, 1907, p. 878.

PREPARATION OF SECRETIN.

TROY, N. Y., Oct. 31, 1907.

To the Editor:—Kindly advise me who is the maker or importer of secretin.

B. S. BOOTH.

ANSWER.—So far as we can learn secretin is not on the market. In the cases reported it has been prepared after the method of Bayliss and Starling and of Moore, who used it with apparent success in some cases of diabetes. This method is described as follows by Nellis B. Foster (*Journal of Biologic Chemistry*, Jan., 1907): "Pig intestines were removed from the animal immediately after slaughter and taken at once from the abbatoir to the laboratory. About two feet of each duodenum was separated for use. Such sections from about twenty-five intestines were extracted at one time. The gut was opened, quickly washed with physiologic salt solution, and the mucosa lightly scraped off with a horn spatula. After passing the mucous membrane through a fine hashing machine it was mixed with an equal volume of 0.4 per cent. hydrochloric acid, ground in a mortar, then transferred to a casserole and slowly heated to boiling. Filtration through cheese cloth freed the material from the larger particles of membrane. After rendering the filtrate less acid by adding sodium hydroxid until the reaction to litmus was faintly, though distinctly, acid, it was sterilized in flasks and was ready for use. This secretin extract was freshly prepared every three days. The dose I have employed was an ounce of this extract a half-hour after meals."

ITALIAN MEDICAL PERIODICALS.

BLACK DIAMOND, CAL., Oct. 25, 1907.

To the Editor:—Where can I obtain an Italian journal of medicine? I wish to subscribe for one for a year. FRANK GREGORY.

ANSWER.—*Il Policlinico*, Corso Umberto 1, N 219, Rome, Italy, is published in three sections: a medical monthly section, a surgical monthly section, and a practical weekly section, all for 30 lire ($6) a year, including postage. The *Gazzetta degli Ospedali*, Corso Magenta, 48, Milan, Italy, publishes 3 editions a week, 22.50 lire ($4.50) a year, including postage. This gazette is indexed in THE JOURNAL. The *Riforma Medica*, is a weekly, which may be addressed: Care Prof. G. Rummo, Naples, Italy. It costs 35.50 lire ($7.10) a year, including postage.

INTERNATIONAL SANITARY CONVENTION IN MEXICO.

CINCINNATI, Nov. 1, 1907.

To the Editor:—Kindly tell me if there is some congress of medicine meeting at Mexico City, sometime in December.

M. LOUISE BENOIT, M.D.

ANSWER.—As mentioned in THE JOURNAL, November 2, page 1536, the Third International Sanitary Convention will meet in the City of Mexico, Dec. 2-7, 1907.

The Public Service

Army Changes.

Memorandum of changes of stations and duties of medical officers, U. S. Army, week ending Nov. 16, 1907:

Tefft, W. H., asst.-surgeon, left Cuba en route to the United States on two months' leave of absence.

Morse, A. W., asst.-surgeon, ordered to Cheyenne Indian Agency, S. D., for duty in field with Second Squad, Second Cavalry.

Vose, W. E., asst.-surgeon, on his arrival at San Francisco, will proceed to Columbus Barracks, Ohio, for duty.

Gosman, G. H. R., asst.-surgeon, leave of absence extended 10 days.

Duncan, W. A., asst.-surgeon, relieved from duty in the Army Transport Service, to take effect on the next arrival of the transport *Thomas*, and ordered to report at the Army General Hospital, Presidio of San Francisco, for duty.

Smart, W. M., asst.-surgeon, ordered to accompany First Cavalry from Fort Clark, Texas, to the Philippine Islands.

Jones, P. L., asst.-surgeon, ordered to accompany First Cavalry from Fort Clark, Texas, to San Francisco, thence for duty as surgeon on transport to sail about Dec. 5, 1907, for the Philippine Islands.

Powell, W. A., asst.-surgeon, granted 30 days' leave of absence.

Appel, D. M., deputy surgeon general, granted 14 days' leave of absence.

Carswell, R. L., and Huntington, P. W., asst.-surgeons, advanced from grade of first lieutenants to that of captain, to date from October 27.

Bloombergh, H. D., asst.-surgeon, granted leave of absence for one month.

Hallock, H. M., surgeon, granted 10 days' leave of absence.

Gunckel, G. I., dental surgeon, left Fort Fremont, S. C., for duty at Fort Moultrie, S. C.

Voorhies, H. G., dental surgeon, left Fort D. A. Russell, Wyo., on sick leave of absence for two months.

Wolven, F. Homer, dental surgeon, sailed on the transport *Buford* for Philippine service.

Whinnery, J. C., dental surgeon, returned from duty at Alaskan posts to duty at Vancouver Barracks, Washington.

Porter, E. H., contract surgeon, returned to duty at Fort Clark, Texas, from leave of absence for ten days.

Dade, W. H., contract surgeon, left Fort D. A. Russell, Wyo., on hunting leave for ten days.

Adair, G. F., contract surgeon, returned from Annapolis Rifle Range, Md., to duty at Fort Wood, N. Y.

McMillan, C. W., contract surgeon, left Fort Crook, Neb., on leave of absence for two months.

de Quevedo, L. G., contract surgeon, returned to duty at San Juan, P. R., from leave of absence.

Garcia, L. C., contract surgeon, left Fort Riley, Kansas, for duty with troops in the Cheyenne River Indian Reservation.

Dade, W. H., contract surgeon, ordered from Fort D. A. Russell, Wyo., to duty with troops in the Cheyenne River Indian Reservation.

Freeland, H. L., contract surgeon, ordered from Fort Leavenworth, Kans., to duty with troops in the Cheyenne River Indian Reservation.

Archer, W. M., Jr., contract surgeon, left Fort Sam Houston, Texas, and arrived at Fort Clark, Texas, for duty.

Thorne, J. I., contract surgeon, ordered from San Francisco, to temporary duty in the department of California, and by first available transport to Manila, P. I., for Philippine service.

Navy Changes.

Changes in the Medical Corps of the U. S. Navy, for the week ending Nov. 16, 1907:

Derr, E. Z., medical director, detached from the Navy Yard, Portsmouth, N. H., and ordered to the Naval Recruiting Station, Providence, R. I.

Steele, J. M., medical inspector, detached from the Naval Recruiting Station, Cleveland, Ohio, and ordered to the Navy Yard, Portsmouth, N. H., and to additional duty in command of the Naval Hospital at that yard.

Means, V. C. B., surgeon, sick leave extended three months from November 16.

Manchester, J. D., P. A. surgeon, detached from the Naval Hospital, Pensacola, Fla., and ordered to the *Panther*, when commissioned.

Payne, J. H., Jr., P. A. surgeon, detached from the Naval Recruiting Station, Providence, R. I., and ordered to the Naval Recruiting Station, Cleveland, Ohio.

Williams, R. B., P. A. surgeon, detached from the *Maine* and ordered to the *Franklin*.

Warner, R. A. asst.-surgeon, detached from the *Louisiana* and ordered to the Naval Hospital, Pensacola, Fla.

Wheeler, L. H., asst.-surgeon, ordered to the Naval Recruiting Station, Indianapolis.

Casto, D. H., asst.-surgeon, detached from the Naval Recruiting Station, Indianapolis, and ordered to the *Maine*.

Steadman, W. G., Jr., asst.-surgeon, detached from the *Franklin* and ordered to the *Louisiana*.

Barber, G. H., surgeon, detached from the *Kearsarge* and ordered to the *Wabash*.

Wilson, H. D., surgeon, ordered to the *Kearsarge*, December 1.

Baker, M. W., P. A. surgeon, detached from duty at the Naval Hospital, New Fort Lyon, Colo., and ordered to the Naval Hospital, New York, N. Y., for treatment.

Bishop, L. W., P. A. surgeon, detached from the *Missouri* and ordered to continue treatment at the Naval Hospital, New York.

Michels, R. H., P. A. surgeon, detached from the Naval Recruiting Station, Kansas City, Mo., and ordered to the *Missouri*.

Belknap, J. L., asst.-surgeon, detached from the *Wabash* and ordered to the Naval Hospital, Boston.

Wickes, G. L., asst.-surgeon, ordered to the Naval Recruiting Station, Kansas City, Mo.

Field, J. G., surgeon, ordered to the Naval Training Station, San Francisco.

Riddle, C., surgeon, detached from the Naval training station, San Francisco, and ordered to Washington, D. C., for examination for promotion, and then to wait orders.

Fiske, C. N., P. A. surgeon, detached from the *Yorktown* and ordered to the Naval Hospital, Mare Island, Cal.

Shepard, G. W., asst.-surgeon, ordered to the Naval Hospital, Mare Island, Cal.

Longabaugh, R. I., asst.-surgeon, detached from the Naval Hospital, Mare Island, Cal., and ordered to the *Yorktown*.

Lung, G. A., surgeon, ordered to the Naval Recruiting Station, Philadelphia.

Bishop, L. W., surgeon, P. A. surgeon, when discharged from treatment at the Naval Hospital, New York, ordered to the Naval Training Station, Newport, R. I.

Public Health and Marine-Hospital Service.

List of changes of station and duties of commissioned and non-commissioned officers of the Public Health and Marine-Hospital Service for the seven days ended Nov. 13, 1907:

Stoner, J. R., surgeon, leave of absence granted for 1 month from October 14, amended so as to grant 25 days only.

von Ezdorf, R. H., P. A. surgeon, granted leave of absence for 3 days.

Foster, A. D., asst.-surgeon, granted leave of absence for 7 days from November 12, under Paragraph 191, Service Regulations.

Foster, A. D., asst.-surgeon, granted leave of absence for 21 days from November 19.

Wightman, W. M., asst.-surgeon, granted leave of absence for 2 days from September 12.

Sweet, E. A., asst.-surgeon, temporarily relieved from duty at Fort Stanton, N. M., and directed to proceed to El Paso, Texas, for temporary duty.

Chapin, C. W., asst.-surgeon, relieved from temporary duty at the Hygienic Laboratory, and directed to proceed to Detroit, reporting to the medical officer in command for assignment to duty.

Marshall, E. R., asst.-surgeon, relieved from duty at Detroit, and directed to proceed to Delaware Breakwater Quarantine Station, and assume command.

Cleaves, F. H., acting asst.-surgeon, granted leave of absence for 12 days from November 18.

Goldthwaite, H., acting asst.-surgeon, granted leave of absence for 1 day, November 18.

Jackson, J. M., acting asst.-surgeon, excused from duty for 14 days from November 18, 1907, without pay.

Mason, W. C., acting asst.-surgeon, granted leave of absence for 6 days from November 22.

BOARD CONVENED.

A board of medical officers was called to meet at San Juan, Porto Rico, for the physical examination of an officer of the Revenue-Cutter Service. Detail for the board: Assistant Surgeon F. A. Ashford, chairman; and Acting Assistant Surgeon Pedro del Valle Atiles, recorder.

Health Reports.

The following cases of smallpox, yellow fever, cholera and plague have been reported to the Surgeon-General, Public Health and Marine-Hospital Service, during the week ended November 15, 1907.

SMALLPOX—UNITED STATES.

California: Los Angeles, Oct. 20-26, 1 case.
Illinois: Chicago, Nov. 3-9, 2 cases; Rockford, Sept. 1-30, 5 cases; Quincy, Oct. 1-31, 1 case.
Indiana: Anderson, Oct. 1-31, 16 cases; Elkhart, Oct. 27-Nov. 2, 3 cases.
Iowa: Cedar Rapids, Oct. 1-31, 1 case.
Kansas: Nine counties, Sept. 1-30, 23 cases.
Massachusetts: Somerville, Nov. 3-9, 1 case.
Missouri: St. Joseph, Oct. 27-Nov. 2, 2 cases.
New Hampshire: Franklin, Oct. 1-31, 1 case.
New Jersey: Newark, Nov. 3-9, 1 case.
Oregon: Portland, Sept. 1-30, 1 case.
Tennessee: Nashville, Nov. 3-9, 3 cases.
Washington: Spokane, Oct. 27-Nov. 2, 1 case.
Wisconsin: La Crosse, Oct. 27-Nov. 2, 2 cases.

SMALLPOX—FOREIGN.

South Africa: Cape Town, Sept. 22-28, 1 case; East London, Sept. 22-28, 2 cases.
Brazil: Pernambuco, Aug. 15-31, 96 deaths.
Canada: Halifax, Oct. 26-Nov. 2, 1 case.
China: Shanghai, Sept. 23-29, 5 deaths.
Chile: Iquique, Oct. 6-12, present.
Columbia: Cartagena, Oct. 16-22, present.
Egypt: General, Sept. 1-16, 24 cases, 6 deaths.
France: Paris, Oct. 13-19, 1 case.
India: Bombay, Oct. 5-11, 1 death.
Italy: General, Oct. 13-24, 37 cases.
Java: Batavia, Sept. 22-28, 18 cases, 4 deaths.
Mexico: Mexico City, Sept. 22-28, 1 death.
Peru: Lima, Oct. 12, present.
Portugal: Lisbon, Oct. 13-26, 5 cases.
Philippine Islands: Manila, Sept. 8-21, 2 cases.
Russia: Moscow, Oct. 6-12, 1 case; Odessa, 2 cases; Riga, Oct. 13-19, 3 cases; St. Petersburg, Sept. 29-Oct. 13, 2 cases; Warsaw, Oct. 1-7, 9 deaths.
Turkey in Asia: Bagdad, Sept. 22-28, present.

CHOLERA.

China: Shanghai, Sept. 23-29, 7 deaths.
India: Madras, Oct. 5-11, 61 deaths.
Japan: Formosa, Sept. 30-Oct. 5, 1 case, 1 death; Kakawa ken, Sept. 1-13, 1 case; Saga ken: 1 case; Wakayama-ken, 1 case; Yokohama, Oct. 6-12, 13 cases; Osaka, Sept. 22-28, 63 cases, 46 deaths.
Manchuria: Dalny, Sept. 22-28, 6 cases, 3 deaths.
Philippines: Manila, Sept. 8-28, 40 cases, 40 deaths; Masbate Province: Mandaon, Sept. 21, present; Straits Settlements: Singapore, Sept. 22-28, 10 deaths; Penang, Sept. 30-Oct. 5, 1 case, 1 death.

YELLOW FEVER.

Cuba: Habana Province: Bainoa, Nov. 9, 1 case; Palos, Nov. 6, 1 case; Matansas Province: Cienfuegos, Nov. 8, 4 cases, 2 cases in the city and 2 cases from the surrounding country.

PLAGUE.

Algeria: Oran, Oct. 1-7, 2 cases; bacteriologically verified to Oct. 7, 5 cases and 4 deaths.
Brazil: Pernambuco, Aug. 15-31, 1 death; Rio de Janeiro, Oct. 1-13, 10 cases, 2 deaths.
Chile: Iquique, Jan. 1-June 30, 154 cases, 53 deaths; Pisagua, 105 cases, 47 deaths: Taltal, 220 cases.
China: Hongkong, Sept. 1-17, 5 cases, 5 deaths.
India: Bombay, Oct. 9-15, 29 deaths.
Japan: Osaka, Sept. 22-28, 7 cases, 7 deaths.
Peru: Callao, Oct. 3-9, 1 case; Lima, 1 case; Trujillo, 1 case.

Medical Economics

THIS DEPARTMENT EMBODIES THE SUBJECTS OF ORGANIZATION, POSTGRADUATE WORK, CONTRACT PRACTICE, INSURANCE FEES, LEGISLATION, ETC.

Postgraduate Work Successful in Battle Creek.

Dr. Wilfred Haughey of Battle Creek reports that the Calhoun County (Mich.) Medical Society has organized two postgraduate clubs, one in Battle Creek and one in Albion. This action was taken immediately after Dr. J. N. McCormack's visit to Battle Creek in October of 1906. The program followed was one made up by the county society and extended over twenty weekly meetings and four subsequent special meetings. The meetings were very largely attended and were of great profit to the members. In June the Battle Creek Medical Club was organized, only members of the Calhoun County Medical Society being eligible. The object of this club is to promote postgraduate study. The course as outlined by the organization committee of the American Medical Association has been adopted and so far eight meetings have been held, which have been exceptionally well attended. The program committee meets on the first Monday of each month and assigns the work for the following month, thus giving each member at least four weeks in which to prepare his subject. An endeavor is made so to arrange the program that each member will be assigned in turn. The reason for organ-

izing the club in Battle Creek is that over one-half of the members of the county society reside in that city and it was learned from experience that this portion of the county society could meet more frequently and thus cover more ground than those physicians residing in other parts of the county. The meetings of the club are open to all members of the county society, and many physicians residing out of town are attending the meetings, two coming twenty-six miles. This work is attracting favorable comment not only from the physicians of the county but from the public as well, as shown by the following news item from one of the local papers:

The Battle Creek Medical Club which has been recently perfected and which has for its purpose the study of postgraduate work, now has a membership of about fifty physicians. The management of the Nichols Hospital has kindly donated the use of several rooms where weekly meetings have been held on Monday evenings. That great interest has already been taken in the work of the club is evidenced by the fact that the weekly average attendance is between thirty and forty.

While as a rule the organization of special clubs or societies outside of the regular plan of organization is not to be commended, as it tends to multiply organizations and to increase needlessly the demands made on physicians, yet in the case of an organization like the Calhoun County Society, where a large number of members are located in one city and can enjoy the advantages of frequent meetings, while the society as a whole can only meet quarterly, it seems advisable to organize an auxiliary or subsidiary organization inside of the county society for the purpose of greater efficiency. Where such organizations are effected, however, great care should be exercised that they in no way depart from the original purpose for which they were established and that the other members of the society are given no reason to feel that the smaller organization is in any danger of monopolizing the parent society. The Battle Creek Club will certainly be of great value to all its members and will prove, we hope, the model on which may be based many similar organizations.

POSTGRADUATE COURSE FOR COUNTY SOCIETIES.

DR. JOHN H. BLACKBURN, DIRECTOR.
BOWLING GREEN, KENTUCKY.

[The Director will be glad to furnish further information and literature to any county society desiring to take up the course.]

Second Month.

FIFTH WEEKLY MEETING.

Abscess of Brain.

Acute Traumatic Abscess.

Pathology: Compound fracture, injury to meninges and cortex, character and quantity of pus, changes in meninges and cortex, granulation and cicatrization.

Symptoms: Local evidences of sepsis, pulse and temperature, focal symptoms. Differentiate from meningitis.

Treatment: Indications for operative treatment.

Chronic Traumatic Abscess.

Pathology: Secondary to pus in skull, foreign bodies, ear, nose, thorax. By metastasis. Sinus-thrombosis. Location of abscess, abscess membrane, mode of extension, rate of growth.

Symptoms: (1) Primary symptoms, cause and significance. (2) Latent period, length, usual symptoms. (3) Secondary symptoms. (4) Terminal period.

Treatment: Indications for exploring or trephining.

Tumors of Brain.

Varieties and Pathology.

Glioma and Sarcoma: Age, primary and secondary, diffused, number, rate of growth, from white or gray matter, points of difference.

Carcinoma: Age, primary, by extension, by metastasis, number, location.

Cysts: With malignant tumors, from clot, parasites, depressed fracture.

Tubercle: Age, history, secondary or primary, number, location.

Gumma: Previous history, number, location.

Symptoms.

General: Headache, optic neuritis, vomiting, giddiness, mental disturbance.

Localizing: (a) Central motor area, signal symptom, extension, paralysis or anesthesia. (b) Prefrontal region, mental symptoms, later symptoms. (c) Parieto-occipital lobe, aphasia. (d) Occipital lobe. (e) Temporal lobe. (f) Basal ganglia. (g) Pons and medulla.

Postgraduate Course Adopted by County Societies.

The following societies have adopted the course of postgraduate study:

ILLINOIS.

Morgan County.

INDIANA.

Cass County.
Rush County.
Vigo County.
Wayne County.

IOWA.

Cerro Gordo County.
Cedar County.
Muscatine County.

KENTUCKY.

Allen County.
Boyd County.
Caldwell-Lyon County.
Carter County.
Floyd County.
Henderson County.
Lawrence County.
Taylor County.
Warren County.

LOUISIANA.

Lincoln Parrish.

MICHIGAN.

Genesee County.
Battle Creek Medical Club.

MISSOURI.

Jasper County.
Ray County.

PENNSYLVANIA.

Erie County.

WEST VIRGINIA.

Barbour-Randolph-Tucker Co.
Barbour Club.
Harrison County.
Little Kanawha & Ohio Valley Medical Society.
Marion County.
Ohio County.

Investigate Railroad Contract Practice.

The November *Texas State Journal of Medicine* contains the following editorial which is so pertinent and of such a timely nature as to be worthy of reproduction in full:

THE RAILROAD COMMITTEE REPORTS PROGRESS.

This committee was appointed to investigate the report that some Texas railroads are paying excessively low fees to their local surgeons. When the data collected by this committee are presented to the association, intelligent action may be taken. The committee began its work investigating the fee schedules of Texas railroads, local surgeons' contracts, salaries of chief surgeons and the organization and control of the railroad hospital associations. Most chief surgeons have cooperated with the committee in this work. A few have resented the inquiries to some extent, doubtless misunderstanding their purpose. The chief surgeons of Texas railroads are among our most capable and public-spirited surgeons, who desire just fee schedules and who have the best interests of the Texas medical profession at heart. In most instances they are as underpaid as their local surgeons and quite as dependent on higher railroad officials. The present investigation will benefit them, as well as their local surgeons, removing the general professional opinion that they are large salaried, and, to some extent, autocratic officials. Their annual salaries range in Texas from $1,800 to $3,600. The fee schedules promulgated by them are in most instances dictated by the railroad officials, as is also frequently the appointment of local surgeons. The hospital associations of Texas railroads have no separate, legal existence; so far as discovered not one is chartered, and not one gives railroad employés any voice in its management. Hospital associations are departments of the various railroads, which collect on the average 50 cents a month from employés, thus enabling the men to pay for their own surgical treatment. Surgical work for Texas railroads is generally paid for at one-half the local fee schedule; transportation is then issued local surgeons in compensation for the remaining 50 per cent. of the fee. Ninety per cent. of Texas railroads further require local surgeons to render *medical* attention to employés without compensation. This exaction is apparently justified as a return for some supposed local prestige. Local surgeons themselves are the chief objectors to this arrangement. On their resignation the vacancies are quickly filled by the younger and more eager professional element. The attitude of the general profession on this question resembles that assumed regarding low insurance fees. The desire is not to criticise chief surgeons, antagonize railroads, nor force the resignation of local surgeons, but to bring influence to bear to secure just compensation for railroad surgeons—a class of the profession which seems powerless to help itself. The data already collected seem to indicate that railroads should cease to exact medical attention of

local surgeons. Such attention has nothing to do with the special risks in railroad service and we see no more reason for it than for any other corporation, lodge or contract medical practice. Railway surgeons are at present the poorest paid railroad employés. On account of the present powerless position of many of the chief surgeons, if anything of value is to be accomplished the medical profession may be compelled to take the matter over the heads of the chief surgeons to the higher railway officials.

It is gratifying to observe the increasing efficiency of our state organizations. Ten years ago the question of railroad surgical contracts would have been voted down or made the subject of sweeping resolutions without investigation, depending on the complexion of the particular body before which the resolutions were presented. To-day a committee is appointed which will devote from one to two years of hard, accurate, scientific work on the subject and then will report its findings to the state association. The results already obtained are of interest and of value. The final report of this committee will undoubtedly be authoritative on this subject. If the organized profession is to command the respect and attention of the public and particularly of business men and corporations it must be as accurate and painstaking in its methods on economic subjects as the leaders in scientific research are on scientific questions. The time has passed for hastily written generalizing resolutions as a solution for economic questions. The time has come for the profession to take up carefully, systematically and exhaustively the study of the economic problems which mutually affect it and the public. As contributions to this end, the work of the Texas committee on railroad contracts, like that of the Michigan State Medical Society on contract practice or some of the committees of the Chicago Medical and the Philadelphia medical societies, is a noteworthy and gratifying indication of better things.

Medical Education and State Boards of Registration

COMING EXAMINATIONS.

CALIFORNIA Board of Medical Examiners, Los Angeles, December 3. Associate Secretary, Dr. F. Dudley Tait, 1879 Sutter St., San Francisco.

MARYLAND Homeopathic Board of Medical Examiners, Baltimore, December 3. Secretary, Dr. Joseph S. Garrison, 484 W. North Ave., Baltimore.

PENNSYLVANIA Boards of Medical Examiners, Philadelphia, December 3-6. Application for examination should be made to Dr. N. C. Schaeffer, Secretary of the Medical Council, Harrisburg.

DELAWARE State Medical Examining Board, Dover, December 10, and by the Homeopathic Board at Wilmington on same date. Secretary of the Medical Council, Dr. P. W. Tomlinson, Wilmington.

OKLAHOMA State Board of Medical Examiners, Guthrie, December 10-11. Secretary, Dr. J. W. Baker, Enid.

OHIO Board of Medical Registration and Examination, Columbus, December 10-12. Secretary, Dr. George H. Matson, State House, Columbus.

IOWA State Board of Medical Examiners, Capitol Building, December 10-12. Secretary, Dr. Louis A. Thomas, Des Moines.

MARYLAND Board of Medical Examiners, 847 N. Eutaw St., Baltimore, December 10-13. Secretary, Dr. J. McP. Scott, 129 W. Washington St., Hagerstown.

VIRGINIA Medical Examining Board, Staunton, December 10-13. Secretary, Dr. R. S. Martin, Stuart.

KENTUCKY State Board of Health, Louisville, December 17. Secretary, Dr. J. N. McCormack, Bowling Green.

University of Wisconsin's Medical Appointments.—It is most encouraging to note the high degree of excellence in medical instruction aimed at by the University of Wisconsin in the appointments to the new Medical Department, as evidenced by the list published in *Science*, Nov. 1, 1907. The appointments are given as follows:

The board of regents has named Dr. Charles R. Bardeen dean of the new college of medicine. The faculty of the new medical college includes, besides Dean Bardeen as professor of anatomy, Dr. Joseph Erlanger, professor of physiology; Dr. H. L. Russell, professor of bacteriology; Dr. M. P. Ravenel, professor of bacteriology; Dr. W. D. Frost, associate professor of bacteriology; E. G. Hastings, assistant professor of bacteriology; Dr. C. A. Fuller, instructor in bacteriology and assistant in the hygienic laboratory; Dr. Harold C. Bradley, assistant professor of physiologic chemistry; Dr. J. R. Blackman, assistant in physiology; Dr. Richard Fischer, assistant professor of pharmacy; Dr. Edward Kremers, professor of pharmaceutical chemistry; Dr. Louis Kahlenberg, professor of physical chemistry; Dr. Victor Lenher, associate professor of chemistry; Dean E. A. Birge, Associate Prof. W. S. Marshal and Assistant Prof. S. J. Holmes in the department of zoology; Prof. R. A. Harper, Associate Prof. C. E. Allen and Assistant Prof. R. H. Denniston of the department of botany; and Prof. B. W. Snow, Prof. C. E. Mendenhall and Assistant Prof. A. H. Taylor of the department of physics.

Prof. Mazyck Porcher Ravenel takes charge of the department of bacteriology, succeeding Dr. Harry L. Russell, who was appointed dean of the College of Agriculture, vice W. A. Henry, resigned. Dr. Ravenel has been assistant medical director of the Henry Phipps Institute for the Study of Tuberculosis in Philadelphia, and was formerly bacteriologist for the State Sanitary Live Stock Board of Pennsylvania, where he carried on research work in connection with treatment of tuberculosis and rabies.

In the department of chemistry, R. K. Brewer, W. G. Wilcox, Edward Wolesensky, C. W. Hill and Charles B. Gates have been made assistants, the latter to take the place of W. H. Doughty, resigned. James T. Bowles is sanitary chemist in the hygienic laboratory, S. K. Susiski is research assistant in agricultural chemistry, and E. V. McCollum is instructor in agricultural chemistry.

John R. Roebuck, who is a graduate of Toronto University and for the past year has been professor of physics at McGill Medical College, Toronto, has been appointed instructor in physics in place of A. L. Colton. Two other instructors appointed in this department are A. W. Smith, Haverford College, and H. C. Hiel, and as assistants W. A. Titsworth of Rutgers College, W. F. Steve, H. J. Plagge, D. S. Dye, O. H. Gaarden, F. W. Forsythe, F. K. Brainard and L. B. Aldrich were named. Haymond Schulz was made assistant in pharmacy in place of Florence Gage, resigned, and C. C. LeFebre is the assistant. The resignation of G. M. Reed as instructor of botany was accepted, and the following assistants in the department were named: E. G. Artzburger, J. M. Brannon, Mary A. Hickman and Hallie D. M. Jolivette. The assistantship made vacant through the resignation of A. B. Clawson is filled by Robert W. Hegner. The new assistant in bacteriology, in place of N. W. Wayson, resigned, is O. O. Nelson, and C. W. Smith is instructor in the department.

English Schools and Divided Curriculum.—In an address by Sir R. Douglass Powell, published in the *Lancet*, Oct. 5, 1907, it is stated that two London medical schools, University College and King's College, have separated the subjects of anatomy, physiology, chemistry, physics, biology and materia medica from those of the hospital curriculum, making them college subjects rather than medical school subjects. Among the reasons advanced for the change it is said that "the subjects of anatomy and physiology are too large and absorbing nowadays" to be taught by men in active practice and that "modern antiseptic requirements" require the removal of the dissecting room from the hospital which forms the nucleus of the English medical school. The speaker also says that chemistry and biology can not now be "efficiently taught by men engaged in hospital work and private practice," and further states his opinion that physics, chemistry and biology should be removed entirely from the medical curriculum and be included in the science studies required for admission to the medical course. This would allow time in the first two years of the medical course for more thorough work in anatomy, comparative anatomy, physiology and physiologic chemistry. While the transferring of the first two years' work from the hospital to the college is commended, it is shown that these subjects should continue to be taught by men who have had a medical training, since "without the teachings of the symptomatology and pathology of disease many of the most important advances in the anatomy and physiology of the nervous system would still be dark to us." Therefore, in the teaching of the branches of the first two years of the medical course some attempt should be made to keep their application to the needs of suffering humanity in the minds of the students.

The warning here given will apply equally well in the United States to such schools as are transferring their first two years of teaching to the universities. While such transfer may be desired, the subjects should continue to be taught by men who have had a medical training.

To Take Up College Inspection.—Last April a special committee was appointed by the American Confederation of Examining Boards to take up and further the work of systematically inspecting medical colleges. This was done following the report of the Council on Medical Education regarding an inspection of the medical colleges of the United States. The committee met at Detroit, Oct. 31, 1907, to complete its organization and to arrange definite plans of work. Dr. B. D. Harison, Detroit, was made chairman, and Dr. J. V. Stevens, Jefferson, Wis., was made secretary. Another meeting will be held in Chicago, Dec. 19, 1907.

Texas Board Withdraws Recognition.—Official information from the Texas State Board of Medical Examiners states that recognition has been withdrawn from the Gate City Medical College located at Texarkana, Texas, and the College of Physicians and Surgeons of Dallas, Texas, formerly the Bell Medical College, on the ground that they are not reputable medical schools.

Texas Reciprocity Report.—Dr. T. T. Jackson, former secretary of Texas State Board of Medical Examiners, reported that seventeen reciprocal licenses were granted at the meeting held by that board June 25-27, 1907. The following colleges were represented:

LICENSED THROUGH RECIPROCITY.

College.	Year Grad.	Reciprocity with.
University and Bellevue Hosp. Med. Coll.	(1906)	New York
Atlanta College of P. and S.	(1907)	Penna.
Southern Med. Coll., Atlanta	(1896)	Georgia
Northwestern Univ. Med. School	(1889)	Minnesota
Louisville Med. Coll.	(1897)	Georgia
Tulane University of Louisiana	(1901)	Louisiana
University of Minnesota	(1901)	Minnesota
Medico-Chirurgical Coll., Phila.	(1896) Georgia; (1896)	Penna.
Vanderbilt University	(1898)	Georgia
Medical College of Virginia	(1890)	Virginia
University of Virginia	(1902)	Virginia
University of Toronto, Canada	(1872)	Dist. Colum.
Victoria College, Canada*	(1869)	Kansas
McGill University, Canada	(1889)	Minnesota
Non-graduates	(1, Georgia), (1, Pennsylvania)	

*Also known as Rolph's School.

Nebraska May and August Reports.—Dr. George H. Brash, former secretary of the Nebraska State Board of Health, reported the written examinations held at Lincoln, May 28-29, and Aug. 7-8, 1907. The number of subjects examined in was 8; total number of questions asked, 80; percentage required to pass, 75. Eighteen reciprocal licenses were granted at these examinations.

At the examination held May 28-29, the total number of candidates examined was 53, of whom 45 passed and 8 failed. The following colleges were represented:

PASSED.

College.	Year Grad.	Per Cent.
Chicago Coll. of Med. and Surg.	(1907)	79.6
Rush Medical College	(1905)	82.
Baltimore Medical College	(1907)	83.6
St. Louis University	(1907)	80.1
Creighton Medical College, (1907) 75, 75.2, 76.2, 79.3, 80.6, 80.8, 82.5, 83.3, 83.6, 84.3, 84.7, 85, 85.7, 87.3, 87.6, 88, 89.2.		
University of Nebraska, (1907) 75.7, 76.5, 78.2, 79, 79.6, 82, 82.5, 83, 83, 83.5, 83.8, 84.3, 84.5, 86, 86.2, 87.8, 88.2, 89.8.		
Lincoln Medical College,	(1907) 75, 76.7, 79.7, 80.6,	84.6
Nebraska College of Medicine	(1907)	83.2

FAILED.

Barnes Medical College	(1904)	66.
Creighton Medical College	(1907)	71.7, 72.2
Lincoln Medical College	(1907)	59.8, 65.8, 67.6, 71.2
Nebraska College of Medicine	(1907)	73.1

At the examination held August 7-8, the total number of candidates examined was 10, all of whom passed. The following colleges were represented:

PASSED.

College.	Year Grad.	Per Cent.
College of P. and S., Chicago	(1907)	75.
Northwestern Univ. Med. School	(1907)	88.1
St. Louis Coll. of P. and S.	(1907)	75.6
Barnes Medical College	(1904)	78.1
Creighton Medical College	(1907)	75.2, 78.6
Lincoln Medical College	(1907) 76,	77.5, 76.7
Nebraska College of Medicine	(1907)	80.3

LICENSED THROUGH RECIPROCITY.

	Year Grad.	Reciprocity with.
George Washington University	(1906)	Dist. Colum.
College of P. and S., Chicago	(1902)	Illinois
Bennett Coll. of Ecl. Med. and Surg.	(1906)	Kansas
Hahnemann Med. Coll., Chicago	(1906)	Illinois
Rush Medical College	(1900) (1906)	Illinois
American Coll. of Med. and Surg.	(1906)	Illinois
College of P. and S., Keokuk	(1905) (1906)	Iowa
University of Iowa	(2, 1906)	Iowa
Kansas Medical College	(1900)	Kansas
Grand Rapids Medical Coll.	(1907)	Maine
King Eclectic Med. Coll.	(1884)	Iowa
Marion-Sims-Beaumont Med. Coll.	(1902)	Illinois
Creighton Medical College	(1905)	Wyoming
University of Nebraska	(1905)	Kansas
McGill University, Canada	(1897)	Illinois

New Hampshire July Report.—Dr. H. C. Morrison, regent of the Board of Medical Examiners for the New Hampshire Medical Society, reports the written examination held at Concord, July 9-10, 1907. The number of subjects examined in was 7; total number of questions asked, 70; percentage required to pass, 75. The total number of candidates examined was 16, of whom 10 passed and 6 failed. The following colleges were represented:

PASSED.

College.	Year Grad.	Per Cent.
Baltimore Med. Coll.	(1906) 82.6; (1907)	77.9,81.
University of Maryland	(1905)	78.2
College of P. and S., New York	(1900)	87.9
Dartmouth Med. Coll.	(1906) 82.5; (1907)	81, 84.
Woman's Med. Coll. of Pennsylvania	(1899)	77.4
Laval University, Canada	(1904)	75.5

FAILED.

Baltimore Med. Coll.	(1903) 73.2; (1905)	65.7
New York University	(1875)	68.7
University of Vermont	(1906)	72.3
Laval University, Canada	(1905)	70.9
University of Bishop College, Canada	(1901)	71.4

Georgia October Report.—Dr. E. R. Anthony, secretary of the Georgia Regular Board of Medical Examiners, reports the written examination held at Atlanta, Oct. 8-9, 1907. The number of subjects examined in was 10; total number of questions asked, 50; percentage required to pass, 80. The total number of candidates examined was 33, of whom 22 passed and 11 failed. Six reciprocal licenses were granted at this examination. The following colleges were represented:

PASSED.

College.	Year Grad.	Per Cent.
Medical Coll. of Alabama	(1907)	81
Howard University	(1907)	80, 85
Atlanta School of Medicine	(1907)	80
University of Louisville	(1907)	82, 85
Johns Hopkins Med. School	(1907)	92
University of Maryland	(1907)	83, 87
Baltimore Med. Coll.	(1907)	87
Leonard Med. School	(1907)	94
Jefferson Med. Coll.	(1907)	86
Woman's Med. Coll. of Pennsylvania	(1906)	89
Chattanooga Med. Coll.	(1903)	81
University of the South	(1906) 82, 85; (1907)	82
Knoxville Med. Coll.	(1904)	80
Meharry Med. Coll.	(1907)	83, 84
Vanderbilt University	(1907)	84
Gate City Med. Coll.	(1907)	81

FAILED.

University of Louisville	(1907)	78, 78
Louisville National Med. Coll.	(1907)	78
Baltimore University	(1904)	76
Chattanooga Med. Coll., (1896) 78; (1901) 77; (1903) 74; (1904) 72; (1907) 70.		
Knoxville Med. Coll.	(1905)	77
College of P. and S., Memphis	(1907)	78

LICENSED THROUGH RECIPROCITY.

	Year Grad.	Reciprocity with.
Illinois Med. Coll.	(1901)	Indiana
Hospital Coll. of Med., Louisville	(1904)	Kentucky
Hospital Coll. of Med., Louisville	(1897)	Indiana
Tulane University of Louisiana	(1885)	Texas
University of Michigan	(1885)	Iowa
Friedrich-Alexanders University, Germany	(1869)	Wisconsin

Marriages

JOHN CASPER, M.D., to Miss Dora Kueble, both of Jasper, Ind., November 8.

EMIL ARTHUR RACH, M.D., to Miss Ella Boyle, both of Chicago, November 6.

ROBERT H. FIRTH, M.D., to Miss Ellen Louise Bailer, both of Dayton, Ohio, November 12.

J. HOWARD P. O'NEIL, M.D., to Miss Josephine Mary Carson, both of Chicago, November 6.

ARTHUR H. ROHLFING, M.D., to Miss Dorothy E. Lawrenson, both of St. Louis, September 4.

FRANK M. HORSTMANN, M.D., Rice Lake, Wis., to Miss Mabel Hepburn of Chicago, October 9.

WALLACE J. SMITH, M.D., Cadillac, Mich., to Miss Maud Ferguson Dean, Detroit, Mich., October 23.

R. B. BECKWITH, M.D., Lumberton, N. C., to Miss Beulah Hardison of Mocksville, N. C., November 6.

ROBERT FRANCIS GIBSON, M.D., Somerville, Mass., to Miss Christina Tuff Gibbon of Boston, November 4.

LLOYD A. KEFAUVER, M.D., Canal Zone, to Miss Christine Rose Russell of Hampstead, L. I., November 5.

WILLIAM STEPHENSON, major and surgeon, U. S. A., to Miss Edith Valerie Henrici, at Manila, P. I., September 21.

GEORGE C. STEMEN, M.D., Denver, Colo., to Mrs. Madge Hays Beardsley of Decatur, Ill., at St. Louis, November 6.

JOHN W. DICKENSON, M.D., Boone, Iowa, to Mrs. Lena M. Hammer of Marshalltown, Iowa, at Crown Point, Ind., recently.

ROBERT GRAHAM HEINER, M.D., passed assistant surgeon, U. S. N., to Miss Helen T. Kinkaid, at Philadelphia, November 2.

CARROLL HUNTER GERRY, M.D., Shrewsbury, Pa., to Miss Fanny W. Sieling of York, Pa., at Williamsport, Pa., November 7.

JOHN MCMAHON, M.D., San José, Cal., to Mrs. Daisy Dowdoll Lewis of Terre Haute, Ind., at San Bernardino, Cal., November 3.

WILLIAM HALBERT MCCRACKEN, M.D., Alligator, Miss., to Miss Mollie Lea Porter of Slidge, Miss., at Memphis, Tenn., November 9.

THOMAS WELCH DEW, M.D., Lewiston, Va., to Miss Alice Augusta Dew, at Bethany Church, Spottsylvania County, Virginia, November 6.

Deaths

Jabez **Perkins, M.D.** Western Reserve Medical College, Cleveland, 1849; a member of the American Medical Association; surgeon of the Fourteenth Michigan Volunteer Infantry and later medical director of the Twentieth Army Corps during the Civil War; once a member of the Michigan legislature from Lenawee County, Mich.; died at his home in Owosso, November 5, from rheumatism, after an illness of three years, aged 87.

Thomas Hiland, M.D. lieutenant commander, United States Navy, retired; who entered the service Nov. 22, 1861, and had nine years and nine months' sea service and eight years and four months' shore duty, and was retired March 13, 1883, on account of incapacity incident to the service, and had since resided at Grafton, Mass.; died at the Bar Harbor (Maine) Hospital from heart disease, October 29, aged 67.

Arthur Harris Cowdrey, M.D. Medical School of Harvard University, Boston, 1857; a member of the Massachusetts and Middlesex County medical societies; assistant surgeon of the Seventh Massachusetts Volunteer Infantry, and surgeon of the Thirty-seventh United States Infantry during the Civil War; died at his home in Stoneham, Mass., November 4, after an invalidism of two years, aged 71.

William H. DeWitt, M.D. Miami Medical College, Cincinnati, 1872; a member of the American Medical Association and the Cincinnati Academy of Medicine; physician to the Cincinnati Hospital and Longview Asylum for the Insane, and medical director and chief of staff of Christ's Hospital; died in the latter institution, October 11, from chronic nephritis, after a long illness, aged 61.

Campbell Caldwell Fite, M.D. Bellevue Hospital Medical College, New York City, 1877; in 1882 elected secretary and executive officer of the Tennessee State Board of Health, and later assistant superintendent of the East Tennessee Hospital for the Insane, Knoxville; died at his home in New York City, November 9, after a prolonged illness, aged 52.

Thomas P. Corbally, M.D. Bellevue Hospital Medical College, New York City, 1868; a member of the medical staff of St. Peter's Hospital, Brooklyn, since 1868, and for the past two years resident physician at the institution, died at the hospital November 5, from pneumonia, after an illness of three days, aged 84.

James M. Wertz, M.D. University of Michigan, Department of Medicine and Surgery, Ann Arbor, 1858, 1859 or 1860; assistant surgeon of a colored regiment during the Civil War, and for 40 years a resident of Crestline, Ohio; died suddenly at his home in that city, October 31, aged 70.

Henry Clay Monroe, M.D. New York University Medical College, New York City, 1872; a member of the Medical Society of the State of New York and Washington County Medical Society; died at his home in Sandy Hill, November 3, after an illness of several months, aged 52.

Daniel McNeill Parker, M.D. University of Edinburgh, Scotland, 1845; L.R.C.S. Edinburgh, 1845; one of the most prominent practitioners of Nova Scotia and second president of the Canadian Medical Association; died at his home in Dartmouth, N. S., November 4, aged 85.

Mary H. Cheyney, M.D. Woman's Medical College of Pennsylvania, Philadelphia, 1885; for many years a member of the medical staff of the Chester County (Pa.) Hospital; died at her home in West Chester, November 9, from pneumonia, after an illness of eight days, aged 50.

Ewing Welch Robertson, M.D. University of Michigan, Department of Medicine and Surgery, Ann Arbor, 1854; surgeon in the Federal service during the Civil War; died at his home in Cleveland, Ohio, November 7, from cerebral hemorrhage, aged 76.

Travis Glasscock Dailey, a member of the Warrick County (Ind.) Medical Society; who practiced for many years in Booneville, but retired 20 years ago; died at his home, October 22, from cerebral hemorrhage, after an illness of one week, aged 83.

John W. Winn, M.D. Kansas City (Mo.) Medical College, 1888; of Plattsburg, Mo.; a member of the Missouri State Medical Association and Clinton County Medical Society; died in St. Joseph's Hospital, Kansas City, Mo., November 4, aged 46.

Benjamin P. Wright, M.D. University of Virginia, Medical Department, Charlottesville, 1859; of Battery, Va.; chairman of the board of education of Essex County; died at the home of his son-in-law at Tappahannock, Va., November 5, aged 76.

George H. McGeer, Jr., M.D. Cooper Medical College, San Francisco, 1889; of Tacoma, Wash.; a member of the American Medical Association; died in Lane Hospital, San Francisco, October 30, while en route to Tucson, Ariz., aged 33.

Mandeville O. Greenwald, M.D. University of Pennsylvania, Department of Medicine, Philadelphia, 1872; for many years a practitioner of Milan, O.; died at Norristown, Pa., November 2, after a prolonged illness, aged 64.

Abel Huntington, M.D. New York University Medical College, New York City, 1862; a member of the medical societies of the State and County of New York; died at his home in Islip, R. I., November 6, aged 67.

Abram J. Brower, M.D. New York University Medical College, New York City, 1861; of Utica, N. Y.; who retired from practice 40 years ago; died at Saranac Lake, November 8, from tuberculosis, aged 67.

Edward C. Ellet, M.D. Jefferson Medical College, Philadelphia, 1849; for more than 50 years a practitioner of Bunker Hill, Ill.; died at the home of his daughter in Alton, Ill., November 4, aged 88.

Samuel Brough, M.D. University of Pennsylvania, Department of Medicine, Philadelphia, 1871; after seven years of invalidism, died at his home in Helena, Ky., October 29, aged 61.

Matthew H. West, M.D. Chicago Medical College, 1881; a prominent practitioner and citizen of Homestead, Pa.; died at his home in that place, November 6, from pneumonia, aged 65.

T. N. B. Whiteleather, M.D. Ohio Medical University, Columbus, 1898; died at his home in Malvern, Ohio, November 5, from tuberculosis after an illness of more than a year, aged 45.

John James Kincaid, M.D. College of Physicians and Surgeons, Keokuk, Iowa, 1875; died at his home in Bowling Green, Mo., November 1, from cancer of the liver, aged 55.

John T. Ball, M.D. University of Southern California, College of Medicine, Los Angeles, 1906; died at his home in Independence, Cal., November 1, from pneumonia, aged 28.

William F. Herron, M.D. University of Arkansas, Medical Department, Little Rock, 1905; of Gritts, Okla.; died at a hospital in Fort Smith, Ark., November 2, aged 34.

Ossian Sumner, M.D. Jefferson Medical College, 1842; died at his home in Providence, R. I., Nov. 11, 1906, from senile debility, after an illness of seven months, aged 87.

Martin Emil Richter, M.D. University of Leipzig, Germany; for 50 years a practitioner of Portsmouth, N. H.; died at his home in that city, November 4, aged 80.

George A. Light, M.D. Pulte Medical College, Cincinnati, 1888; of Burnside, Miss.; died in Leipsic, Ohio, November 9, from chronic bronchitis, aged 48.

Evelyn Augusta Churchill Stone, M.D. Homeopathic College, University of Michigan, 1882; died at her home in Laporte, Ind., November 11, aged 62.

E. L. Glenn, M.D. Medical College of the State of South Carolina, Charleston, 1848; of Newport, S. C.; died in Rock Hill, S. C., September 13.

Jerome H. Boyd, M.D. American Medical College, St. Louis, 1878; of Victor, Colo., died in Pueblo, Colo., November 6, after a lingering illness.

Edwin R. Horton, M.D. Eclectic Medical Institute, Cincinnati, 1878; died at his home in Bluffton, Ind., November 4, from nephritis, aged 58.

W. L. Hitchcock, M.D. Atlanta (Ga.) Medical College, 1851; died at his home in Carrollton, Ga., November 9, from pneumonia, aged 87.

A. C. Grubbs, M.D. Medical College of Virginia, Richmond, 1870; died at his home in Shanghai, Va., November 9, after a long illness.

Deaths Abroad.

A. Doyon, M.D., founder of the Paris *Annales de Dermatologie* in 1868, and a constant worker on the editorial staff, translator into French of the principal dermatologic works of

Hebra, Kaposi, Neisser, Auspitz and Finger, died at Uriage, September 21, aged 80. At the time of his death he had just finished a translation of Unna's "General Therapeutics of Cutaneous Affections," now in press.

D. Capozzi, M.D., professor of medical pathology at Naples, died October 21, aged 76. He bequeathed his estate to the Hospital for Incurables at Naples and to found a hospital in his native town, Moricone.

A. Sevestre, M.D., one of the best known pediatrists of Paris, died there October 19, aged 64. His published works were numerous; most of them were on children's diseases and hospital hygiene.

L. Glück, M.D., chief of the hospital at Sarajevo, in Bosnia, and a frequent contributor to the medical press on syphilis and dermatologic subjects, died October 25.

L. Fürst, M.D., formerly in charge of the children's clinic at Leipsic, but residing in Berlin for the last fourteen years, died October 24.

Society Proceedings

COMING MEETINGS.

Southern Surgical and Gyn. Assn., New Orleans, Dec. 17-19.
American Association of Anatomists, Chicago, Dec. 26-27.
Western Surgical and Gyn. Assn., St. Louis, Mo., Dec. 30-31.

IDAHO STATE MEDICAL ASSOCIATION.

Fifteenth Annual Meeting, held at Boise, Oct. 3-4, 1907.

(*Continued from page 1705.*)

Report of a Case Wherein Large Enteroliths Caused Obstruction of the Bowel.

DR. JOHN BOECK, Boise, reported the above condition in a woman giving a history of abnormal cravings and considerable stomach and bowel disturbance, and an irresistible desire, during two pregnancies, to eat clay. Obstruction of the bowel occurred, and, on operation, two concretions one and one-fourth inches in diameter were found to be causing the obstruction. The patient made an uneventful recovery.

DISCUSSION.

DR. JAMES L. STEWART, Boise, said that he saw this patient before and at the time of operation. There were no symptoms referable to the gall bladder, and after finding the intestinal obstruction and removing it, no further search was made.

DR. L. HEKTOEN, Chicago, said that he had had very little experience with such cases. Intestinal enteroliths are so very rare that without very careful examination as to the composition of these concretions, he would not like to call them true enteroliths.

DR. JOSEPH C. BLOODGOOD, Baltimore, was of the opinion that these calculi were gallstones. He recalled a similar case seen in Johns Hopkins Hospital, in which a large gallstone caused no symptoms whatever except that of obstruction of the bowel. It is well to remember, however, that enteroliths, while very rare, have been found, and the history of clay eating in this case is, of course, suspicious of enteroliths.

DR. H. D. NILES, Salt Lake City, said the interest in this case centered on the origin of the stones. They are probably gallstones. He had two similar concretions that he knew to be gallstones, which he had taken from the intestinal canal. It is unusual to find true enteroliths, and these specimens having the appearance of gallstones, he thinks that there could be little doubt as to their nature.

DR. F. H. BRANDT, Boise, mentioned a case seen by him in hospital, with obstruction of bowels by a stone larger than the ones shown here to-day.

DR. C. N. SUTTNER, Walla Walla, Wash., cited a fatal case with perforation of gall bladder and escape of three large stones into the abdominal cavity.

DR. O. W. HALL, Star, reported a case in his experience in which a gallstone four inches long and one inch in diameter had ulcerated through the abdominal wall.

DR. C. L. DUTTON, Meridian, has seen a case of obstruction of bowels which at autopsy showed a similar stone in the small intestine just below opening of the common duct.

DR. E. B. MCDANIEL, Baker City, Ore., has seen a case in his practice in which an anastomosis had formed between gall bladder and intestine, with a large calculus just in the act of passing into the intestine.

Etiology of Acute Rheumatism.

DR. J. C. DAVIES, Boise, discussed the confusion caused by the term "rheumatism," the older ideas as to classification, and the relation of sex, age, climate and vocation, to the disease. There is to-day, he said, a growing belief or conviction that acute rheumatism is an infectious disease, and substantiated this statement by referring to the results obtained by various investigators.

DISCUSSION.

DR. WILLIAM C. MAXEY, Caldwell, said that the point which impressed him more than any other in the paper was that though it was quite generally accepted to-day that acute rheumatism was caused by an infection, yet the formation of pus in the affected joints is unknown.

DR. J. B. WRIGHT, Caldwell, thinks that the prevalence of malaria in warmer climates is probably a potent cause for there being less rheumatism in these climates—the two diseases do not seem to mix well.

DR. H. D. NILES, Salt Lake City, said that in many cases more than one cause or source of infection will be found, and he thinks that we are not justified in putting all cases of rheumatism under one head. He emphasized the importance of defective elimination as a potent factor and also referred to the frequency with which there is a history of tonsillitis ushering in an attack of rheumatism.

DR. J. C. DAVIES said that he believes that the next step would be the classifying of the different forms of rheumatism by laboratory methods. He believes rheumatism to be an infection, but there are evidently different forms of the infection and each produces an individual type of disease.

Interstitial Nephritis.

DR. C. L. DUTTON, Meridian, said that physicians are continually failing to recognize this condition because of its habit of masquerading behind unpretentious symptoms. After mentioning the usual etiologic factors, he said that the true excitants and irritants that induce the inflammation are undoubtedly of the nature of poisonous purin bases and putrefaction of albumins in the alimentary canal. Owing to the long disturbed functions of the liver, and engorgement of its channels, these toxic albumins are filtered through the liver into the circulation, irritating the heart and arteries, disturbing the functions of tissues, impairing metabolism, and, further, giving rise to protein derivatives. The symptoms, diagnosis, prognosis and treatment were also discussed in detail.

DISCUSSION.

DR. F. H. BRANDT, Boise, thinks it is advisable to divide the etiologic factors into primary and secondary, and emphasized the insidiousness of the disease. He advised a salt-free diet as being less irritating to the diseased kidneys. Decapsulation of the kidney, as suggested by Edebohls, might be tried in extreme cases, but he does not think much of it.

DR. C. L. DUTTON laid special emphasis on the importance of examining the urine in all obscure cases with dropsy, asthma, dyspnea, etc., and the importance of early diagnosis. The small number of granular and epithelial casts found in this condition, as compared with the parenchymatous form, is an important point to remember in diagnosis.

Experience with Hyoscin-Morphin-Cactin Anesthesia.

DR. J. H. TAYLOR, Boise, claimed only a very limited experience. Abbott's H. M. C. tablets were used in all his cases. In three of four surgical cases he found that its use greatly lessened the amount of chloroform required, the preoperative distress, and excitement were prevented, postoperative excitement and restlessness were practically eliminated, and there was little nausea and no tendency to postoperative hemorrhage. In his obstetrical practice he has used half-tablet doses at intervals of three or four hours, as he thought it indicated, and all patients had become quiet, resting or sleeping between pains, slight lengthening of intervals, seeming improvement of

contractions, and no noticeable increase of asphyxia of child. He thinks the benefit to the mother outweighs the possible danger to the child.

DISCUSSION.

DR. JOHN BOECK, Boise, has had only limited experience—not sufficient to form a definite opinion. So far he is well pleased with its use, though he has used the hyoscin and morphin without cactin.

DR. KELLOGG mentioned a case in which operation was contemplated for obstruction of the larynx and in which ether and chloroform were thought to be contraindicated. A single tablet of H. M. C. was given hypodermically, followed by almost immediate death, and in his opinion the tablet caused the fatal result.

DR. J. L. STEWART, Boise, has used this tablet in several cases and felt more or less indifferent toward the combination until he used it in a case of bronchial asthma; one dose relieved the attack and also prevented the nausea which followed morphin alone.

DR. J. H. BEAN, Pocatello, reported three cases, one amputation and two abortions, with good results from use of H. M. C.

DR. H. D. NILES, Salt Lake City, thinks the efficacy of this compound very doubtful and from the conflicting reports, asked how are we to arrive at a decision.

DR. F. H. BRANDT, Boise, called attention to a death reported recently in THE JOURNAL of the American Medical Association.

DR. HINMAN reported knowledge of three deaths from this anesthetic occurring in Davenport, Iowa.

DR. E. B. MCDANIEL, Baker City, Ore., said that he tried it in one case, with unsatisfactory results, though the patient did not die.

DR. JACOB PRINZING, Ontario, Ore., has used it in a case of inoperable cancer, with relief of pain, but it made patient crazy afterward.

DR. F. W. COMPTON, Meridian, has used this anesthetic in eight obstetrical cases; three babies showed asphyxia.

DR. G. E. SHAWHAN, Boise, said that he thinks the ill-effects from H. M. C. are due to an idiosyncrasy on the part of the patient for one of the drugs.

DR. E. F. ROOT, Salt Lake City, spoke also of idiosyncrasy to effects of hyoscin, which seemed to be increased by addition of morphin, and cited cases in his own practice. He does not approve of giving morphin in confinement and felt sure that the child would be killed in this way.

DR. T. P. HALEY, Boise, has had limited experience with H. M. C., which, however, has taught him that the drug should be used with great caution.

DR. L. P. MCCALLA, Boise, after reading many favorable reports, especially from Europe, tried H. M. C. in one case of abdominal surgery with very disagreeable symptoms during the anesthesia, followed by vomiting and other postoperative disturbances. The one experience frightened him away from further use of the drug.

DR. TAYLOR thinks that the idiosyncrasy is usually due to the hyoscin. In regard to asphyxia of the child, he stated that he has found asphyxia in fully 50 per cent. of cases where H. M. C. was not used.

(To be continued.)

CHICAGO MEDICAL SOCIETY.

Regular Meeting, held Oct. 30, 1907.

The President, DR. HENRY B. FAVILL, in the Chair.

SYMPOSIUM ON OPSONINS.

DR. LUDVIG HEKTOEN discussed the general considerations of phagocytosis and opsonins. This paper will appear in THE JOURNAL.

Virulent Pneumococci and Opsonins.

DR. E. C. ROSENOW said that the pneumococcus has been found in the blood in 85 per cent. of 300 cases of lobar pneumonia. Shortly before, during, and after crisis, blood cultures are apt to be negative. Positive cultures were obtained in 20 per cent. of the cases examined after crisis; hence crisis is not the result of death of pneumococci. The blood serum before, during and after crisis possesses no pneumococcidal properties. The pneumococci isolated from the blood in pneumonia resist phagocytosis in normal and pneumonic serum, while those isolated from the sputum are more readily taken up and show a correspondingly lower grade of virulence. Non-virulent pneumococci not only remove opsonins from serum, become phagocytable, but are destroyed within the leucocyte as well, so that a leucocytic blood has a pneumococcidal action which is directly proportionate to the number of living leucocytes present. On the other hand, highly virulent pneumococci do not remove opsonins from serum, and resist opsonification and phagocytosis completely in normal and pneumonic serum. The virulent pneumococci which penetrate into the general circulation in pneumonia are, therefore, probably not rendered more susceptible to phagocytosis by opsonins, since cultivation in opsonic serum or blood preserves virulence and resistance to phagocytosis. It has been found possible to extract from virulent pneumococci, which themselves originally do not take up pneumococco-opsonins, a substance, or combination of substances, which neutralizes the opsonins in human serum. In other words, it seems possible to extract from virulent pneumococci the substance on which virulence seems to depend, and at present the name "virulin" seems quite appropriate. From the evidence at hand it would seem likely that opsonification and phagocytosis plays an important rôle in the final destruction of pneumococci in pneumonia, but that this mechanism is primary, is unlikely, because as here shown virulent pneumococci must be previously altered before they will absorb opsonin and become phagocytable.

Bacteriotherapy in Tuberculosis.

DR. MARY LINCOLN said that the purpose of the past eight months' work in opsonotherapy in tuberculosis has been: 1. To determine the value of the tubercle vaccine in the treatment of tuberculosis. 2. To determine the reliability of the opsonic index in diagnosis. 3. To learn whether the opsonic index is the real guide in administering the vaccine. 4. To test the accuracy of the technic in opsonic index estimation.

With a view to obtaining as much data as possible in answering these questions, the endeavor was made to treat as many patients as was consistent with careful work, and to make as frequent opsonic index examinations as possible. One hundred and eighty different individuals have been examined, of whom 40 were patients treated, 35 were for diagnosis, and 105 normals. A total of 2,157 opsonic index estimations have been made, consisting of 449 of normal individuals, 130 of diagnosis cases, and 1,578 of patients treated. Between 50 and 100 opsonic index determinations have been made of 5 normal individuals, and single examinations of 100 other normals. From 26 patients the following averages were determined: The average number of days between injections is 7.2. The average of the highest opsonic indices is 1.3. The highest opsonic index occurs on the average on the 3.6 day. The average of the opsonic indices previous to each injection is 1.0. There is, with very few exceptions, a rise in the opsonic index after each injection of vaccine. With one exception, there are no two successive maximal rises in the opsonic index after the injections.

In summing up the data as to the reliability of the opsonic index determination, there are three striking results that present themselves: 1. The comparatively small difference in the counts made by three different individuals of the same 40 slides. 2. The small range, that is, 0.8 to 1.0, of the opsonic index of normal in over 350 examinations. It would seem impossible to obtain such comparatively uniform indices with an unreliable technic. 3. The generally consistent opsonic indices, e. g., such as one would expect to follow vaccine injections, in over 2,000 estimations.

The Opsonic Index in Gonorrhea.

DR. RUTH VAIL described the technic used in determining the gonococco-opsonic index, also the normal gonococco-opsonic index, and then presented a preliminary report of the study of the indices in 30 cases of gonorrhea. Her conclusions are: 1. In 300 determinations the gonococco-opsonic index in normal individuals ranged from 0.8 to 1.2, with only 18 exceptions. 2. In one determination each of 51 different normal individuals

the opsonic index ranged from 0.8 to 1.2, with only two exceptions, one being 0.7, another 1.4. 3. In 27 cases examined from 2 to 10 times, the diagnosis was positive in 89 per cent. 4. The phagocytic index runs closely parallel to the opsonic index in normal individuals. This is true in gonorrheal patients before vaccine treatment is begun. 5. After 36 injections, the phagocytic and opsonic indices reached their highest points on the same day in 94.4 per cent. 6. The average highest phagocytic index is higher than the average highest opsonic index. 7. The phagocytic index tends to fall earlier than the opsonic index. 8. Ten million gonococci is the average dose which has raised the opsonic index the most satisfactorily in adults; 4,000,000 to 8,000,000 in children. 9. In a series of 52 gonococcus vaccine injections, only two were followed by a negative phase in the opsonic index. She has seen no clinical negative phase. She can not yet draw clinical conclusions from the results of gonococcus vaccine.

Bacteriotherapy in Staphylococcus Infections.

DR. GRACE FRITH-HAGANS referred to the dosage and administration in the treatment of acne, furuncles, abscess, etc. In the acute cases, and to begin the treatment of chronic cases of infection, a stock vaccine has been used in many instances until an autogenous vaccine could be made. Thirteen of the cases received from 1 to 3 inoculations of stock vaccine as preliminary treatment, the index going to 1.3 in one case, 1.4 in two, 1.5 in two, 1.6 in two, 1.7 in one, and 1.9 in another case, leaving only four instances showing no appreciable rise. Five cases of acute and one of chronic furunculosis have been treated entirely with stock vaccines, in three of which the patients received two injections each, with most satisfactory results; the fourth, a dispensary patient, was improving, but failed to report his final condition, and the fifth showed no unusual tendency to a more rapid recovery than under ordinary treatment. In the chronic case the patient has just reported the appearance and disappearance of a lesion starting in a similar manner to former furuncles, without the formation of pus.

In mixed infections it is important to isolate the germs and make separate vaccines which should be given independently of each other, the blood being run through to each organism and treatment administered when indicated by the fall of the index.

Clinical Results of Bacteriotherapy.

DR. JOHN C. HOLLISTER reported three cases representing three different types, as follows: 1. Chronic staphylococcus infections, clinically characterized by boils, furuncles, glandular abscesses, nail infections, etc. 2. Localized tuberculosis, complicated by secondary infections. 3. Chronic generalized tuberculosis. In summarizing the author stated that in a case of glandular and epididymal tuberculosis, the diagnosis having been confirmed by chest findings and histologic examination of the skin lesions, marked improvement in both conditions has occurred synchronously with the administration of tuberculin. As to general clinical results, the author believes that the following conclusions are conservative: 1. Inoculation by autogenous vaccines, if properly administered and regulated as to dose and interval by following the opsonic index, is one of the best, if not the best, method to-day of curing and preventing the recurrence of chronic staphylococcus infections. 2. The treatment of chronic acne by injections of autogenous vaccines of staphylococcus often brings about a cure and in the majority of cases is attended by marked improvement. 3. In chronic localized tuberculosis, the administration of tuberculin as guided by the opsonic index is frequently of distinct value, acting not only as a general tonic, but hastening local tissue repair. 4. Occasional marked results may be expected in chronic localized infections by the colon bacillus (cystitis, pyelitis, etc.), and by the gonococcus (arthritis).

DISCUSSION.

DR. L. L. MCARTHUR said that when the question of leucocytosis came up in its relation to surgical infections, there was shown a decided indifference to the significance which it had, yet there came a time when it was generally adopted as a means of diagnosis and guide as to treatment. So, too, he thinks that we will find it to be the same in regard to the opsonic index. The opsonic index is sufficiently accurate as a guide not to depend on the mere clinical statement of the patient or the crude clinical findings that percussion, auscultation, or physical examination give. He thinks physicians should act in accordance with the light they have until they have better light.

DR. JOHN RIDLON referred to ten cases of chronic joint disease in which the patients were treated by bacteriotherapy. Two patients were selected, especially for this treatment, because they had been growing steadily worse for some months, and might be expected to die within a year, to determine if this treatment would save their lives. He treated a similar number of cases without vaccination in order to compare the results. He wanted to know what influence the vaccine treatment would have on discharging tubercular sinuses. He found that these sinuses did not close any more rapidly than sinuses could be expected to close in patients in equally good health without vaccination. He found that these abscesses developed more rapidly, with spontaneous openings, than they could have expected them to have done without the vaccination treatment. Dr. Ridlon believes that abscesses appeared in some of the cases which would not have appeared had the patients not received the vaccination treatment. He is not sure that the opsonic index is a certain, harmless and valuable means of diagnosis of tuberculosis in all cases.

DR. EDWARD H. OCHSNER cautioned physicians about being carried away by the enthusiasm which is now prevailing with regard to opsonic therapy. This method of treatment is simply an adjunct to other well-recognized forms of treatment. Any physician in treating, say, 100 cases of tuberculosis by this method alone will meet with dire failure. There are many things in treating tuberculosis which he thinks are more valuable than the opsonic treatment alone. In the past year he has seen treated over seventy cases of joint tuberculosis with this form of treatment in addition to other recognized measures, and he believes the patients have improved faster than they would have done by the other forms of treatment alone. He pointed out two dangers from the vaccination treatment which should be borne in mind: 1, The danger of using it without the opsonic control; 2, the danger of using it when one thinks he has got the opsonic control. He has taught six assistants how to make the opsonic count. Of this number only three have been reliable. Personally, if he had a tuberculous joint, he would want it treated by the vaccine method, but he would want to be sure that the man who is to read the opsonic index is accurate, because it is the only way one can differentiate between a therapeutic and poisonous dose of the vaccine.

DR. MAXIMILIAN HERZOG said that they have treated at the Michael Reese Hospital a large number of uncomplicated cases of tuberculosis by the vaccine method, and in some have had wonderful results, while in 50 per cent. of them the results have been indifferent or bad. They have had cases of local discharging tubercular sinuses which have healed, and have remained so permanently, under this treatment. On the other hand, they have had cases of local tuberculosis which have not improved. He concludes that the vaccine treatment, under the guidance of the opsonic index, is not a panacea for all bacterial infections. It is not a panacea for a single one of any of the bacterial infections. Inasmuch as good results are obtained in a certain percentage of these cases, physicians are justified in adopting this treatment and trying to make the best of it.

DR. ALICE HAMILTON said that one thing in favor of the vaccine treatment is that it is applicable to all kinds of cases which can be treated in dispensary practice, while local treatment cannot be given satisfactorily outside of a hospital.

DR. T. L. DAGG said it is hard to get a working standard, so that one group of workers can compare their work with another. Each worker has a standard largely his own, and with these factors always interfering and changing, it does not appear to him to be a scientific method of using the treatment. At the Johns Hopkins Hospital they have largely done away with the opsonic determination and are now relying on the clinical symptoms.

DR. L. L. MCARTHUR said that he does not abandon other measures of treatment for the vaccine method.

DR. HEKTOEN said that from frequent personal examinations

and from carefully following the work of others, within certain limits, he believes the results are fairly constant and harmonious in the estimation of the opsonic index. There are innumerable sources of error, however, which, from a scientific point of view, will impair the results. They may not have any material effect so far as the practical results are concerned. Finally, he emphasized the importance of considering the advisability of introducing into the treatment of chronic cases of tuberculosis the method of tuberculin immunization by gradually increasing the dose so carefully that no recognizable clinical symptoms are produced and controlled by the opsonic index.

Medicolegal

Power of City to Conduct Hospital—Not Liable for Negligent Acts of Employés.

The Supreme Court of Illinois holds in the case of Tollefson vs. City of Ottawa, that the power of a city to establish and maintain a hospital is given by the Illinois statute giving power to appoint a board of health, and prescribe its powers and duties; to erect and establish hospitals and medical dispensaries, and control and regulate the same; and, to do all acts, make all regulations which may be necessary or expedient for the promotion of health or the suppression of disease. It is apparent, the court thinks, that under these provisions a city may conduct a hospital, either as a charity or as a means for the promotion of the general health of all its residents or the suppression of disease among all the inhabitants of the municipality, and for no other purpose.

If the purpose be charitable, then the city is not liable for the negligent acts of its employés in the institution. If, on the other hand, the purpose is to provide for the general health and welfare, and to provide for suppressing and preventing the spread of contagious or other diseases, the statute authorizing the city to acquire and maintain the hospital must be regarded as an exercise of the police power, which comprehends the making and enforcement of all such laws, ordinances, and regulations as pertain to the comfort, safety, health, convenience, good order and welfare of the public. A city is not liable for the negligent acts of its agents or servants engaged in executing, enforcing or giving effect to its police ordinances and regulations.

Attention was called to the fact that under the Illinois law powers and duties conferred on municipal corporations are of two kinds: First, public or governmental; and, second, private or proprietary. And it was urged that maintaining a hospital by a city for revenue and profit to the city, as charged, brought this case within the second class of powers and duties, and that the city was, therefore, liable for the negligence of its employés engaged to conducting the hospital. But the court answers that the city did not possess the power, in its private or proprietary capacity, to engage in the business of conducting a hospital for revenue. If the municipal authorities had unlawfully entered on a course of that character, the city could not be made liable for negligence on their part or on the part of those employed by them in carrying out their purpose.

Internal Revenue Instructions Concerning Medicinal Preparations.

The United States Commissioner of Internal Revenue says, in Treasury Decision 1251, of Oct. 12, 1907, that special tax is required for the manufacture and sale of alleged medicinal alcoholic compounds, or for the sale of malt extracts manufactured from fermented liquors, the drugs used in the manufacture of which are not sufficient in amount or character to render the product unfit for use as a beverage; or, in the case of cordials, extracts, and essences, in which the amount of alcohol is greater than is necessary to preserve the ingredients, or to extract the properties or cut the oils, and hold same in solution.

Manufacturers of alcoholic compounds, malt extracts, flavoring extracts, essences, and soda-water syrups who wish to avoid liability for special taxes must satisfy themselves that their products are within the limits herein defined, and those who put out alcoholic compounds of doubtful medicinal value, or containing a questionable excess of alcohol, must do so at the risk of being required to pay special taxes for the manufacture and sale of same.

The commissioner also says, in Circular 707, dated Oct. 12, 1907, just published, addressed to collectors and revenue agents, that, as a result of the expansion of prohibition territory because of municipal and state laws, the sale of alcoholic beverages, put up and labeled as medicines, is increasing rapidly. This office has no desire to interfere with the business of manufacturers of and dealers in genuine medicines, but it desires to enforce impartially and uniformly the internal revenue laws. With the view, therefore, of collecting the tax and of putting all articles with which this bureau deals in the proper class, the following instructions are given to collectors, revenue agents and others concerned:

The exempting clause of Section 3246, Revised Statutes, as applied to druggists or manufacturers of medicine, is as follows: Nor shall any special tax be imposed on apothecaries as to wines and spirituous liquors which they use exclusively in the preparation or making up of medicines.

The courts have uniformly held that manufacturers who in good faith use spirituous liquors or wines in the preparation of medicines, to be used as such and not as beverages, do not violate Section 3242, Revised Statutes, by not qualifying as liquor dealers.

The test in such cases has heretofore been: Was the preparation manufactured in good faith for sale as a medicine or was it manufactured for sale as a beverage? The question of liability to special tax for manufacturing or selling distilled spirits, wine or malt liquor, compounded with some other ingredient, was simply one of fact, and the fact to be determined was: Was the compound containing spirituous liquor or wine sold as a beverage or as a medicine?

Investigations by the field officers of this bureau indicate that there are three classes of cases arising:

First—There is a class of preparations held out as medicines by the manufacturers, but which are in fact intended to be sold and consumed as beverages, and which are really nothing but alcoholic beverages. Such preparations are usually manufactured for sale in localities where for some reason spirituous liquors can not be legally sold.

Second—There is a class of preparations which are really medicines and which are often used as such, but which contain alcohol considerably in excess of what is necessary to hold in solution or preserve the medicinal ingredients. Such preparations fall within the category of beverages as known to internal revenue laws, no matter how they may be sold and used.

Third—There is a class of preparations containing no more alcohol than is necessary to hold the medicinal agents in solution. These are usually sold as medicines, but they are sometimes sold and consumed as beverages. They properly fall within the classification of medicines.

Manufacturers of the first two classes are liable as rectifiers (or brewers, in the case of malt liquors), and persons selling the preparations are liable as liquor or malt liquor dealers. The question of good faith on the part of the dealer is not an element to be considered.

There are a number of tests whereby the character of the first class of preparations can be fixed. For instance, if the compound contains alcohol considerably in excess of what is necessary to preserve any medicinal agents claimed to be used; if the drugs used are in such small quantities as to give the preparation little therapeutic value; if, in the manufacture of the preparation ingredients whose special office is to render it potable are employed; if the preparation is largely sold in localities where prohibition laws operate; if it is sold at places where beverages are usually dispensed; or if the preparation is generally purchased by persons under such circumstances and in such quantities as to indicate that it is consumed as a beverage, then in either event it is held by this office that the preparation is a beverage and special tax liability accrues without any reference as to the character of particular sales. Investigating officers will in such cases simply secure legal evi-

dence that the party being investigated has sold a preparation known to be, or shown to come, within this class. This applies likewise to preparations of the second class.

In the case of the third class of preparations it is held that the seller is not subject to special tax liability unless legal evidence that the goods purchased were consumed as a beverage is obtained, and that the sales were made under such circumstances as to put the dealer on notice of the purpose for which they were purchased.

It is the character of the goods as determined by all of the facts and circumstances connected with its manufacture and sale that puts it in the first, second or third class as indicated above. If it fall within the third class it is the character of the sales, in the case of each particular dealer, that fixes the liability.

Before demanding the tax or reporting for assessment, revenue officers should first fix the character of the goods. To that end, if he has not already done so, the officer should investigate carefully as to the manner in which the preparation is manufactured, of what it consists, the percentage of alcohol, in what localities it is sold, the character of the business of the dealers who put it on the market, and the class of consumers. Samples of the preparation should be purchased in the open market, and such samples, together with the formula under which it is manufactured, should be forwarded to this office. The claims that the preparation is a medicine, whether the same are set up on labels covering the packages or otherwise, should not, without investigation, be accepted as true, but every effort should be made to develop the facts.

Care should be exercised to the end that no legitimate business is unnecessarily interfered with. Equal care should be exercised, however, to the end that all tax due is collected, and that all sham medicines are put in the class to which they belong.

It will be presumed that all manufacturers and dealers know the character of the goods they are manufacturing or selling, as the case may be, and the laws relative to the same. Hereafter no claim of a want of proper notice from this bureau as to special tax liability for manufacturing or selling a particular compound will be accepted as an answer to the demand for any tax that may have accrued.

In case of all preparations not heretofore passed on by this office, the question of liability for manufacturing or selling same must first be submitted to this office before any action looking to the assessment or collection of tax is taken by the investigating officer.

All former circulars, decisions or rules in conflict with the terms of this circular are hereby revoked.

Current Medical Literature

Titles marked with an asterisk (*) are abstracted below.

Medical Record, New York.

November 9.

1 *Kuhn's Lung Suction Mask for Hyperemic (Bier) Treatment of Pulmonary Tuberculosis. W. Meyer, New York.
2 *Radium for Treatment of Cancer and Lupus. W. J. Morton, New York.
3 *Intracranial Complications of Disease of the Accessory Sinuses of the Nose. L. A. Coffin, New York.
4 *Phototherapy in Neuritis. A. D. Rockwell, New York.

1. **Bier's Hyperemic Treatment in Pulmonary Tuberculosis.**—Willy Meyer describes a method of applying Bier's suction treatment to pulmonary tuberculosis. It consists in the use of a celluloid mask constructed after the fashion of an anesthetic inhaler, which fits over the nose and mouth. Its construction is such that obstruction can be produced to the respiration to any extent desired, thus inducing pulmonary hyperemia. Inspiration takes place through the nose, expiration through the mouth. The apparatus is worn two or three times a day at first for about fifteen minutes, the length of application being gradually increased. The advantages of this mask, as pointed out by its originator, Kuhn, are: 1, The healing of the tuberculous foci in the lungs, by the induction of Bier's hyperemia; 2, the increase of red and white blood corpuscles, as well as of hemoglobin in the blood. So far no instance is known in which the mask has done harm. Its action is best in incipient cases, and advanced cases are benefited so long as chronic toxemia and pronounced weakness of the heart do not render impossible any kind of improvement. The risk of hemorrhage is not a contraindication; in fact, the liability to a recurrence seems lessened by it. At autopsy a man who died of chronic intestinal tuberculosis and who had worn the mask for months showed the tuberculosis lung foci isolated and cicatrized. Meyer considers that the mask will prove also of great service in anemia, not only phthisical but ordinary. It has proved also of great benefit in relieving the pulmonary circulation in cases of advanced valvular disease of the heart, and also in obstinate asthma.

2. **Radium in Cancer and Lupus.**—Morton considers radium as superior to the Roentgen ray in superficial cancers for several reasons: 1, Accuracy of dosage; 2, greater penetrating power, resulting in deeper and wider action; 3, by enclosing radium in aluminum or mica it is possible to use the beta, or cathode, rays; 4, clinical experience shows that pure radium bromid has a rapid aggressive, fulminating action in the treatment of superficial cancer and lupus vulgaris. Frequent consecutive sittings over several weeks give the best results. Radium evokes no increased growth as an irritant would. He reports fifteen cases.

3. **Intracranial Complications of Sinusitis.**—The connection of disease of the sinuses with cerebral complications is most frequent in the case of the sphenoidal sinus, according to Coffin, and least so in that of the ethmoidal sinus, of which Coffin has never known an instance.

4. **Phototherapy in Neuritis.**—Rockwell considers that in phototherapy we have a method of treatment theoretically well adapted for the relief of pain dependent on congestive and inflammatory conditions; and in neuritis he has found the like treatment far more efficacious than any other therapeutic measure. He reports ten cases of neuritis treated with marked benefit in this way.

New York Medical Journal.

November 9.

5 *Modern Lithotrity. J. W. S. Gouley, New York.
6 *A Medical Crazy Quilt. W. B. Konkle, Montoursville, Pa.
7 Tuberculotherapy in Tuberculosis. F. W. F. Ross, London.
8 *Asphyxia Neonatorum. I. L. Hill, New York.
9 One Hundred Consecutive Cases of Celiotomy for Pelvic Diseases in Women. C. G. Child, Jr., New York.
10 *Perforation of the Gastrointestinal Tract by Swallowed Bodies. G. G. Ross, Philadelphia.
11 Extrauterine Pregnancy. L. G. Hanley, Buffalo.
12 *Treatment of Snakebites as Seen in the Jungle. C. S. Braddock, Jr., Haddonfield, N. J.

5. **Modern Lithotrity.**—Gouley goes at great length into the subject of lithotrity, particularly in reference to children, and gives a history of stone-crushing operations on them. From a study of the literature of this subject, covering a period of thirty years, he concludes that the trend of thought and conviction is growing toward perineal lithotomy as the safer operation in children under 10 years of age.

6. **A Medical Crazy Quilt.**—The scope of Konkle's article may be surmised from the subdivisions: The carpet in the doctor's office; the office cuspidor; head washing; the administration of normal salt solution by the mouth; a heart sustainer; morphin; acetanilid; the right drug in the right place; proper surgery; rest in puncture wounds of the hand and face; milk; styles and fashions in medicine.

8. **Asphyxia Neonatorum.**—Hill divides asphyxia into three degrees: 1. Temporary apnea, due to slight mechanical obstruction or a brief operation of any one or more of the ordinary causes of asphyxia. 2. Asphyxia livida, in which the heart beat is slow but fairly strong and regular, the cord usually being full, deeply hued, and pulsating vigorously. 3. Asphyxia pallida, with dilated pupils, slow and feeble heartbeat, sinking temperature, muscular relaxation, and a pale and non-pulsating cord. When a child is born in a state of asphyxia, the indications for treatment are: 1, Removal of obstacles to respiration; 2, reflex stimulation of the respiratory center; 3, aëration by artificial means; 4, prevention of loss of body heat; 5, stimulation of the heart and raising of the blood pressure. Hill considers that the cord should be cut at

once in all cases of asphyxia. In the livid stage additional blood is unnecessary, in the pallid stage the cord contents do not circulate, and in either stage the child's removal is desirable for the adoption of other measures. The author discusses the more important methods of restoration of respiration by reflex stimuli and artificial respiration and describes his own routine as follows:

As soon as the head is born, swab out the pharynx with the finger wrapped with gauze and squeeze the contents from the nose. After delivery invert the child. Slap its buttocks and back briskly a few times, dash a little cold water on it and blow into its face. Perform Prochownik's compression of the chest for a half minute. Suck out the mucus from the pharynx of the child with a catheter having a pipette. Blow into the child's mouth, compressing the trachea and pressing gently on the stomach. All these maneuvers are done to better advantage with an assistant's help. It will rarely happen, even if no trained nurse or assistant is present, that some one can not be pressed into service. Now ligate or clamp the cord and cut it. Transfer the child at once to a large tub containing eight inches of water at 108° F. Listen to the heart beat so that improvement or retardation later may be estimated. Perform Byrds' method of artificial respiration without inverting the child at the end of expiration. From time to time mucus should be wiped from the nose and mouth as squeezed out from the air passages. While Byrd's method is being done an assistant, if present, should make rhythmic traction on the tongue. This can be done readily without interrupting the Byrd treatment. The operator can readily pass the index finger of the left hand into the rectum, and from time to time this should be done.

After four minutes, if previous injury does not contraindicate, remove the child from the tub and perform Schultze's method for a minute, giving ten swings in that time. By this time, unless the case is a very bad one, some signs of restoration of breathing are usually present. If the infant has improved in color and started breathing, however weakly, return it to the hot water, massaging its breasts, and watch the efforts at breathing. If this is shallow, plunge the child into a tub of cold water for a second. If the breathing improves, the case is doing well and Byrd's method in the tub, with an occasional reflex stimulation by stretching of the anus will soon bring about satisfactory breathing. All the reflexes now being good, a dip into cold water and a few slaps will probably cause a genuine cry. Continue the Byrd method, however, timing the movements of inspiration and expiration with the child's until both sides of the chest expand well.

If the Schultze swings, however, have not caused any respiratory efforts, return the child to the tub and examine the heart. If it has materially lost ground, inject hypodermatically a solution of strychnin and brandy, which should have been prepared while the swinging was being done. Now perform mouth to mouth insufflation. If improvement follows, continue with this method until the tone is good, and then stimulate breathing by the reflexes. If, however, no betterment is observed, continue with the first routine, the Byrd method combined with the Laborde, alternating after four minutes with the Schultze method for a minute. Omit the latter, however, if the heart is markedly weak, as the additional shock and chilling will not be well borne. Repeat the hypodermatic injections at fifteen minute intervals, and keep up the maneuvers in the tub until breathing is restored or the heart stops beating. Even after an hour of asphyxia a happy result may be obtained.

10.—Abstracted in THE JOURNAL, Nov. 2, 1907, page 1549.

12. **Snakebites.**—Braddock emphasizes among other things the statement that poisonous snakes leave on the victim only the two punctures of the poison tract, while less poisonous and harmless snakes leave besides the two punctures the marks of adventitious teeth. This is of great service in prognosis and may be used as a psychic factor in treatment. He makes some remarks on the hamadryad, the only known snake in the Far East that will always and at all times attack a man on sight, and which stalks him as a tiger stalks his prey. His treatment for snakebites is deep incision, a tourniquet at the proximal side, rubbing crystals of potassium permanganate into the wound and packing it with that drug, the deep injection of a strong solution of permanganate hypodermically in a ring of punctures around the wound, to counteract any poison partly absorbed, then washing out freely with strong permanganate solution; nitroglycerin and digitalin should be given in heroic doses, also brandy and whisky in half-pint doses, and strychnin hypodermically in large doses.

Boston Medical and Surgical Journal.

November 7.

13 *Experiences with Opsonins and Bacterial Vaccines in Treatment of Tuberculosis and Nontuberculous Arthritis. C. F. Painter, Boston.
14 *Serum Treatment of Exophthalmic Goiter. A. Review of the Literature. F. S. Bulkeley, Ayer, Mass.
15 *Syphilis and Gonorrhea in Internal Medicine. R. N. Willson, Philadelphia.
16 Anatomic and Physiologic Rest of the Peritoneum in Peritonitis. B. Robinson, Chicago.
17 *Tarsal Injuries. J. G. W. Knowlton, Exeter, N. H.

13. **Opsonins and Bacterial Vaccines in Arthritis.**—Painter reports the results in a series of eleven cases treated since July, 1906, in the House of the Good Samaritan. In four cases there was no benefit at all. In two there was marked improvement and in another fair. Two patients died, one is dying, and it is an open question if another has not been made temporarily worse by the treatment. In nontuberculous lesions the outcome has been even less satisfactory. Nine cases are described. Conclusions, of course, can not be drawn at present. Painter believes that the danger of expecting too much from an untried method is greater than that of expecting too little. He would encourage the continuance of trials now going on in the laboratory, provided they can be checked by unbiased clinical observation.

14. **Exophthalmic Goiter.**—Bulkeley notes the different characteristics of the drugs used at various times in the treatment of exophthalmic goiter; his observations lead him to ascribe cures to general hygiene and a tendency to spontaneous recovery shown in many cases. He refers to the earliest attempts at a specific treatment by the use of milk and blood serum from thyroidectomized animals, and refers to the results of Rogers and Beebe with their specific antitoxin; but, as he has had no experience with it, he does not include it in his review. He has collected all the cases reported by different observers, critically reviews their statements, and arrives at the conclusion that too many writers report improvement following the use of the various sera to allow of its being considered a coincidence. The serum treatment, he believes, is worthy of a trial in every case.

15. **Syphilis and Gonorrhea in Medicine.**—Willson reviews the literature of syphilis and gonorrhea respectively and constructs therefrom a bird's eye picture of the ramifications of these two diseases in the field of internal medicine. While it will require years of effort and patience to eradicate the disease from the race, yet the task can be accomplished, as our knowledge increases, just as certainly as it has been in the case of smallpox, and as it will be in the case of tuberculosis. With regard to gonorrhea he emphasizes the fact, now becoming daily more and more widely known, that it is not a local infection, but a systemic infection of the blood and lymphatic glands, manifesting itself locally, in certain directions, so markedly as to obscure this underlying fact. Only one method of procedure will avail to cope with the venereal plagues: "If the medical profession will inform the laity fully and freely as to the facts in the case the work will be in the hands of the people from that time forward. There is little doubt that they will rise to the occasion." Their own salvation can be effected only through their cooperation.

17. **Tarsal Injuries.**—Knowlton deals only with serious injuries to the os calcis and the astragalus. He insists on the value and importance of the *x*-ray in the examination of injuries about the ankle. In the treatment of injuries of the tarsus the procedure lies in holding the foot in the proper anatomic position, which can be effected during the period of swelling by a firm pillow and side splints, and subsequently by a plaster bandage. Sprains should be treated according to the severity of the injury done to the ligaments. In fractures the *x*-ray should be used at least three times, once to make the diagnosis, once again at the end of three weeks to show the position of the bone, and lastly before crutches are discontinued, to be sure that good bony union has taken place. If separation of the bone continues and pain persists, or if there is comminution, then the bone should be wired or the fragments excised.

Lancet-Clinic, Cincinnati.

November 9.

18 Surgical Treatment of Cervical Adenitis. J. P. Webster, Chicago.
19 *Specific Therapy Against Tuberculosis. H. Schroer, Cincinnati.
20 *Surgical Treatment of Some Inflamed Glands. E. B. Smith, Detroit, Mich.
21 *Treatment of Scarlet Fever as a Streptococcus Disease. J. E. Coleman, Canton, Ill.

19. **Specific Therapy Against Tuberculosis.**—Schroer criticises the various methods of specific therapy against tuberculosis, beginning with the TR. of Koch and including Wright's method, on the ground that "the premises appear unsound, inasmuch as injection of extraneous materials into an organism having a localized area of disequilibrium occasions reaction in the diseased tissues and not in the normal." In regard to the

opsonic index, he says that the bacillus incorporated by a phagocyte is not necessarily dead. In tuberculosis, particularly, one of the frequent methods of dissemination is by phagocytes, which are destroyed by the bacilli they are carrying and a new focus develops at the site of destruction. He considers it questionable whether the opsonic examination is anything but a laboratory method and whether it will ever find a place in general practice. He makes a preliminary announcement that he has devised a method for producing a modification in the tubercle bacilli which renders them susceptible to catalysis in the disease area proper. This, however, is still in the experimental stage.

20.—Abstracted in THE JOURNAL, Oct. 26, 1907, page 1468.

21.—Abstracted in THE JOURNAL, Nov. 16, 1907, page 1707.

The Medical Fortnightly, St. Louis.

October 25.

22 *Relations of the Doctor to the Alcoholic Problem. T. D. Crothers, Hartford, Conn.
23 *Surgical Treatment of Detached Retina. G. W. Maser, Parsons, Kans.
24 Ethmoidal Sinus Affections. J. E. Sawtell, Kansas City, Mo.
25 Plea for Greater Accuracy in Therapeutics. J. R. Buchanan, Nevada, Mo.
26 The Missouri State Sanatorium. O. H. Brown, Mount Vernon, Mo.
27 Statement of the Plans and Purposes of the Missouri State Association for the Control and Prevention of Tuberculosis, with an Appeal to the Public for Financial Support. G. Homan, St. Louis.

22.—Abstracted in THE JOURNAL, Nov. 16, 1907, page 1708.

23. **Detached Retina.**—Maser has repeated six times on two patients this year the operation for detachment of the retina reported by him four years ago through the Kansas State Medical Society, and copied from the operation of Mr. Lang of London, which he thinks should be more widely known to ophthalmologists. Mr. Lang had operated on two patients experimentally, as there could be no possible additional risk to the patients, who were already practically blind, and no other plan of treatment offered any prospect of success. The cases must be selected; the operation can be successful only when the detachment is caused by the presence of serum between the retina and chorioid and before the retina has lost its function. Maser details the various methods that have been adopted for the treatment of detached retina and describes the method he has used, which depends on the creation of a ragged wound in the retina to produce inflammation, with exudation enough to unite the retina to the chorioid. A triangular flap is made in the conjunctiva at a point between the attachment of the recti muscles. After the hemorrhage has ceased, and a clear sclera is seen, a von Graefe cataract knife is pushed through the sclera, chorioid and retina, well into the posterior chamber, then, by turning the knife slightly, the serum is allowed to escape. When the serum is drained the retina is further incised. Turning the knife as near the right angle as possible, the retina is again incised. In this way considerable inflammation follows. This is exactly what is desired, and has been followed in all Maser's cases by a reattachment at the point operated on, but not of the entire retina. That part at some distance from the operation has failed to unite when the separation has involved more than half the retina. A second operation is performed after the eye has become quiet and the tension normal. In some cases a third operation has been done before complete union has been established. In no case has there been any dangerous inflammation. Maser's experience has been most encouraging, as he has succeeded in restoring sight in three out of four patients operated on.

Surgery, Gynecology and Obstetrics, Chicago.

October.

28 *Bacterial Vaccine Therapy in Surgery. L. L. McArthur, Chicago; J. H. Hollister, Chicago, and others.
29 Hysterectomy for Hemorrhage. G. C. Waiss, Chicago.
30 *Case of Pugilist's Ear. G. F. Lydston, Chicago.
31 Appendicitis Complicating the Puerperium. D. C. Hilton, Lincoln, Neb.
32 Simple and Effective Self-Retaining Retractor. J. H. Jacobson, Toledo, Ohio.
33 *Simple Method of Intestinal Anastomosis. H. M. Hepperlen, Beatrice, Neb.
34 Eight Cases of Suprapubic Prostatectomy; Complete Relief of Symptoms and Perfect Functioning of Bladder. G. Walker and W. A. Fisher, Chicago.
35 *Treatment of Ectopia Vesicæ. J. Berg, Stockholm, Sweden.

28. **Bacteriotherapy in Surgery.**—This article contains an elaborate series of charts, tables and clinical reports, besides photomicrographs, and covers the whole subject in an exhaustive manner, making an abstract almost impossible. Practically the same material, however, was presented to the Chicago Medical Society in its symposium on opsonins, Oct. 30, 1907, a report of which appears under "Society Proceedings" in this issue.

30. **Pugilist's Ear.**—This condition, which consists of great distortion and thickening of the auricle, the concha and auditory meatus being filled with cartilaginous tumors of almost the density of bone, is common among pugilists and others exposed to severe blows on the organ. Lydston reports a case in which an effective operation was performed with satisfactory results.

33. **Intestinal Anastomosis.**—Hepperlen thus describes a method of intestinal anastomosis by a suture devised by himself. In a case in which he had to do an intestinal resection unexpectedly the only ligatures at hand were four intestinal needles threaded with No. 1 intestinal silk. He took two of the threaded sutures, tied them together, and proceeded to stitch the bowel. He had his assistant hold the resected ends of the bowel together after the method of the first step in the Connell suture. He then took his ligature of intestinal silk, double and about 24 inches long, with a needle on each end, and started his first suture about one-half inch from the mesenteric attachment, then continued by inserting both needles in opposite directions from the lumen, through all the coats of the bowel, thus continuing the tying of each suture until he had got around the lumen of the bowel to within one-fourth of an inch of where the first stitch was taken. The bowel was then inverted and the second step of the anastomosis completed by inserting the needles from the mucous coat through to the peritoneal coat, crossing them over, and passing them through to the mucous coat, where the knot was tied in the lumen of the bowel. The last three or four stitches were left untied, so as to leave room to manipulate the needle, which drew the bowel together snugly with the last stitch and knot which came under the first stitch or place of starting. All the bowel was completely inverted with all the knots tied in the lumen of the bowel. In case of trouble in placing the last three or four stitches, two or three Lembert stitches might close the small opening remaining, and the Lembert suture might be continued around the field of anastomosis if desired. Hepperlen claims the following advantages for the suture: 1. It is extremely simple and easily understood. 2. There is no drawing of the bowel; it is perfectly secure. 3. It can be used for gastroenterostomy and enteroanastomosis. Hepperlen has used it in one gastroenterostomy.

35. **Ectopia Vesicæ.**—Berg gives an account of his work in this department of surgery. He suggests the following line of treatment, the steps to be performed at suitable intervals: 1. Laparotomy and resection of a loop of small intestine temporarily so fixed along the middle line of the anterior abdominal wall that its upper end is drained above the upper margin of the defect eventually through the rectus muscle. 2. Excision of the mucous coat of the bladder the muscular coat being left; only around the orifices of the ureters an elliptical piece is resected including the entire thickness of the vesical wall. The abdomen is opened by an incision through the whole height of the remaining vesical wall. The loop of intestine is drawn forward. Behind it the peritoneal cavity is again closed, so that the piece of bowel comes to rest on the exposed muscular coat of the bladder. The trigone portion is implanted into the lower part of this loop. In this way a closed bladder is obtained, which at its upper end is drained in a manner enabling the employment of an ordinary vesical fistula bandage. The urine has been entirely shut off from the open neck of the bladder and the urethral groove, both of which still remain. The greatest obstacle to the closure of these parts has consequently been removed. 3. Osteotomy of the pelvic ring and subsequent closure of the neck of the bladder and urethra; the free-dissected ends of the pelvic bones are brought into contact at the symphysis. 4. By the aid of a transverse incision above the symphysis pubis the lower opened end of the bowel may finally be joined to the free-

dissected upper border of the closed neck of the bladder. 5. The opening through which the loop of the intestine has been drained is closed and the skin edges are brought into apposition in front of the newly formed bladder. His general conclusions are as follows: 1. At the present imperfect standpoint of our treatment of extroversion it is wrong to insist on the superiority of one special line of treatment without taking due regard to the age of the patient, the degree of development of the deformity, and secondary changes present. 2. The method of implantation of the ureters is no doubt the one which quickest leads to the goal, but, on the other hand, it necessitates the postponement of the treatment until a later period of life and involves, notwithstanding improved technic, greater dangers than the direct closing method. 3. The isolated closure of the urinary passages must be regarded as the ideal therapeutic measure; the investigators, therefore, should never grow tired in their endeavors to overcome the difficulties attending this method of treatment.

Pediatrics, New York.

October.

36 *Syphilis Hereditaria Tarda. G. F. Lydston, Chicago.
37 Treatment of Tuberculosis of the Bones. W. R. Townsend, New York.
38 The Thyroid in Relation to Marasmus. J. W. Simpson, Edinburgh, Scotland.
39 *Suppurating Middle-Ear Disease of Infancy and Childhood. S. J. Kopetzky, New York.
40 Cerebral Pneumonia. S. P. Wise, Millersburg, O.

36. **Tardy Hereditary Syphilis.**—Lydston appears to consider that this form of syphilis would not have an extensive field if due regard were had to the lesions of congenital syphilis of various kinds which, even if not present at birth, develop from time to time. He warns against diagnosing hereditary syphilis from the classical "snuffles" and says: "A great number of young children, especially in such climates as that of our lake region, are affected by catarrh or coryza that presents an excellent imitation of syphilitic snuffles." Infantile pemphigus, which consists of an eruption of bullæ or blebs sparsely distributed over the skin, he considers an unmistakable evidence of syphilis. The generally accepted idea that the osseous lesions of children are insignificant as compared with the same changes in the adult syphilitic is a mistake. There is in syphilitic new-born children a marked tendency to apoplectic effusions in various situations, particularly in the meninges of the brain and probably also the cord. Children are apt to develop hydrocephalus as a result of syphilitic inheritance. It is probable that congenital syphilis by impairing nutrition has a more or less marked influence in the causation of tuberculous meningitis. The syphilitic soil is one in which the tubercle bacillus will flourish. Lydston describes the general symptoms and treatment. In the latter he recommends the syrup of iodid of iron and inunctions of cod-liver oil with mercury oleate.

39. **Suppurating Middle-Ear Diseases of Infancy.**—Kopetzky summarizes his article practically as follows: In view of the prevalence of middle-ear suppuration in infancy and childhood, when a child, without demonstrable cause and while under usual diet, begins to have fever, is restless, rolls its head and refuses to drink, meanwhile evidencing bowel derangement with consequent loss of weight, then, unless the clinical picture points to a definite pathologic direction, the ears should be subjected to a rigid examination to determine their condition. Among older children the localization of pain and the persistence of fever, with negative results from general examination, point to ear involvement. Finally, because a pathologic process in the ears of the young may be present for a longer period than the obtainable history would suggest, it results, that many cases already have the elements of chronicity when the disease is discovered, bone necrosis having begun.

Journal of South Carolina Medical Association, Greenville.

October.

41 Primary Glaucoma. J. F. Townsend, Charleston.
42 *Treatment of Typhoid. A. W. Browning, Elloree.
43 Disorders of Pregnancy. G. E. Thompson, Inman.
44 *Feeding in Infancy. W. P. Cornell, Charleston.
45 Typhoid Symptoms and Treatment. W. A. Woodruff, Cateechee.

41. **Glaucoma.**—Townsend, in considering the formation of the aqueous humor, suggests that it is not only the much blamed lymph in the aqueous chamber, but also the lymph circulation in the vitreous chamber that is at fault. He considers the anatomy and physiology of the eye and says that excretion of the aqueous humor occurs by three routes: 1. By way of the canal of Schlemm. 2. Through the anterior surface of the eyelids. 3. Through the ciliary body. He considers each of these in detail, and utters a caution against not being on the lookout for glaucoma as a possible cause of rapidly increasing presbyopia, the age times of presbyopia and glaucoma being the same. He suggests that sclerotic changes in the filtering membranes of the eye and circulatory changes in the ocular vessels are more materially concerned in the etiology of primary glaucoma than is now generally acknowledged.

42. **Typhoid.**—Browning expounds at length the modern system of treatment in typhoid with its manifold aspects. He considers strychnin as one of our most valuable remedies, and begins its use in doses of 1/60 grain whenever the pulse remains above 100 a minute. Digitalin, he states, is also a valuable remedy. For profuse diarrhea sterilized milk will often prove controlling. If not, he recommends salol, 3 grains, with bismuth subgallate, from 4 to 10 grains, adding a few doses of acetate of lead if the discharges become seriously frequent.

44. **Feeding in Infancy.**—Cornell insists on adapting the stay in bed for the mother after childbirth, on account not only of the involution of the uterus, but also of its effect on the child. There are cases in which enforced idleness after the cessation of the lochial discharge has caused irritability on the mother's part, which shows its effect on the infant. He protests against unnecessary and indiscriminate handling of the young infant, and says that the baby in this stage of its existence has just five things to do; eat, sleep, urinate, defecate and cry, and only for such needs should it be handled. He considers it a great pity that pediatrists are not also obstetricians and vice versa. The obstetrician has charge of the baby before, during and after birth, and knows all the ins and outs of the mother's temperament. In artificial feeding the only safe rule to follow in starting a milk diet is to begin with everything—fat, sugar and proteid—low. He cautions, when a nursing child of eight or nine months suddenly and without apparent cause becomes upset, not to neglect to make sure by examination that the mother is not again pregnant.

Cleveland Medical Journal.

October.

46 *Suppuration in the Retroperitoneal Glands. C. A. Hamann, Cleveland.
47 *Appendicitis in Children. A. F. House, Cleveland.
48 Treatment of Epilepsy. C. J. Aldrich, Cleveland.
49 Cases of Injury to the Eye by Steel. W. E. Bruner, Cleveland.

46. **Suppuration in the Retroperitoneal Glands.**—Hamann divides these cases into three groups: 1. Those due to lesions in the intestinal mucosa—such as typhoid fever and appendicitis; 2, tuberculosis of the glands, either primary or secondary; 3, cases of suppuration (acute and due to ordinary pus cocci) in which there is no source of infection in the neighborhood, or the suppuration is secondary to an infection of the inguinal glands. His paper is occupied more particularly with the third group, in which he discusses the source of infection, the micro-organisms found, the diagnosis and the treatment. This last consists in making an incision above the outer half of Poupart's ligament, cutting down to the peritoneum—pushing that membrane out of the way—and evacuating the abscess without tearing through the peritoneum. This is, he believes, always possible. Gauze and tube drainage should be left in the cavity. He reports three cases.

47. **Appendicitis in Children.**—House points out that there are certain cases in connection with appendicitis in children which require special attention. As regards the anatomic conditions, compared with the adult form, the infantile appendix is slightly larger if it is considered in relation to the entire alimentary canal. The coats of the infantile appendix are much more delicate in proportion, especially the submucous coat (Kelly). In many children the mesoappendix is very short, which aids disturbances in the circulation of that por-

tion of the appendix which projects beyond the end of the mesentery. The omentum in young children is very small and not very substantial, hence it can not be of so much use in protecting the general peritoneal cavity from a diseased appendix as in the adult. The etiologic factors in children are much the same as those in the adult, but the relationship between appendicitis and infectious diseases must be borne in mind. The greater liability of the male sex appears equally conspicuous in childhood as in later life. In 83 cases of the author's there were 55 males and 28 females. House considers it useless to attempt a classification on the basis of the pathologic changes. The symptoms of appendicitis in children are extremely vague and obscure. Vomiting is commonly the most persistent and most evident symptom. The chief obscurity arises from the fact that it is often impossible to elicit a clear statement as to the exact seat of pain, and tendernes on pressure is apt to be equally doubtful. Even the rigidity of the right rectus, which is one of the most important guides in the diagnosis of appendicitis, is apt to be obscure, owing to the child's mental apprehension tightening all the abdominal muscles, but comparisons made by gently stroking with the fingers across the recti on either side will usually elicit relative increased tension on the right side, even in mild cases. House considers the degree of leucocytosis. He discusses the diagnosis between appendicitis and gastroenteritis, diaphragmatic pleurisy, basal pneumonia, typhoid, ileus, hip disease and hernia, and states that it is often difficult. He reports a case which he has met with in the past year in which the diagnosis between appendicitis and diaphragmatic pleurisy and basal pneumonia was impossible until abnormal chest sounds were well developed. In many children the early symptoms of appendicitis are apt to be those associated with motion, the so-called larvate form. The author believes that there is not the same effort of Nature in children to wall off the inflamed appendix, and that there is a greater tendency to rapid gangrene. House advises early operative procedure in every case of acute appendicitis occurring in children, since in any attack it is impossible to know what course the inflammatory process may take, or to determine the pathologic conditions present. An appendicectomy should be done as soon as the diagnosis of acute appendicitis is made. The only exception made by House is in cases of diffuse peritonitis, in which the Ochsner method should be employed whenever possible.

Detroit Medical Journal.

October.

50 *Recent Advances in Study of Heart Disease. G. Dock, Ann Arbor.
51 Milk Commission of Wayne County Medical Society. T. B. Cooley, Detroit.
52 Killian's Frontal Sinus Operation. E. E. Foster, New Bedford, Mass.

50.—This article also appeared in the *Wisconsin Medical Journal*, August, 1907.

Denver Medical Times and Utah Medical Journal, Denver.

October.

53 Therapeutics of Whooping Cough. J. T. Melvin, Saguache, Colo.
54 Treatment of Whooping Cough. C. F. Shollenberger, Denver.
55 Idem. H. B. Whitney, Denver.
56 Idem. G. Murray, Denver.
57 Idem. F. W. Kenney, Denver.
58 Idem. E. P. Hershey, Denver.
59 Idem. I. V. Beers, Denver.
60 Rheumatic Arthritis. W. C. Abbott, Chicago.

Mississippi Medical Monthly, Vicksburg.

November.

61 Diagnosis and Treatment of Tumors of Uterus. H. M. Folkes, Biloxi.
62 Syphilitic Dementia—Report of Case. G. F. Carroll, Biloxi.
63 Snapshot Diagnosis of Syphilis and its Evil. E. R. McLean, Cleveland.
64 Diagnosis. A. E. Turrentine, Chancy.
65 Importance of Early Treatment of Nose and Nasopharyngeal Troubles. W. L. Howard, Greenville.

Journal of Ophthalmology and Oto-Laryngology, Chicago.

November.

66 Extraction of Cataract in Capsule as Performed by Major Smith. J. R. Williamson, Bhandara, C. P., India.
67 Affections of the Maxillary Antrum and Their Treatment. J. M. Foster, Denver.
68 Cholesteatoma with Perisinus (extradural) Abscess. N. H. Pierce, Chicago.

Virginia Medical Semi-Monthly, Richmond.

October 11.

69 Physiologic Effects of the Waters of Hot Springs, Arkansas. E. H. Martin, Hot Springs.
70 Scarlet Fever—Especially Diagnosis and Treatment. H. Williams, Passaic.
71 Case of Acute Nephritis Following a Peritonsillar Abscess. C. R. Dufour, Washington, D. C.
72 Successful Treatment of Infantile Eczema. J. T. Clarke, Mount Solon.
73 Diphtheria: Diagnosis and Treatment. F. L. Briscoe, Washington, D. C.
74 *Surgical Correction of the Excessively Thick Lip and the Markedly Everted Lip. C. C. Miller, Chicago.

October 25.

75 Diseased Tonsils. C. M. Miller, Richmond, Va.
76 Ten-Year Experience in Obstetrics and a Few Conclusions. C. B. Williams, Philippi, W. Va.
77 Differential Diagnosis of Surgical Lesions in the Abdomen. J. N. Baker, Ala.
78 Thirteen Cases of Prostatectomy with Complications and Sequellæ. A. C. Stokes, Omaha, Neb.

74.—An article on this subject by the same author appeared in the *Lancet-Clinic*, Sept. 28, 1907.

FOREIGN.

Titles marked with an asterisk (*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

British Medical Journal, London.

October 26.

1 *Experiences in Abdominal Surgery. F. T. Paul.
2 *Cholecystectomy: Indications and Contraindications for Its Performance. A. W. Mayo Robson.
3 *Anastomosis Between Common Bile Duct and Duodenum for Obstructive Jaundice. A. Fullerton.
4 Address by the President of the Section of Medicine, British Medical Association. W. Gordon.
5 *Indications for Operation in Cases of Intracranial Tumor. J. S. R. Russell.
6 Recent Outbreak of Cerebrospinal Fever in Belfast. A. G. Robb.
7 *Tuberculin Treatment of Tuberculosis in Children. C. Riviere.
8 *Diagnosis of Acute Pancreatitis. W. Osler.
9 Open-Air Roof Wards on Metropolitan Hospitals. W. P. Northrup.
10 Case of Lymphadenoma Treated by X-Rays. J. M. Clarke.
11 *Diagnosis and Treatment of Pericarditis. S. West.
12 Prevention of Appendicitis. W. J. Tyson.
13 *Pathology and Treatment of Rheumatoid Arthritis and Morbid Conditions Which Simulate It. A. P. Luff.
14 *Case of Wasp Sting. T. R. Atkinson.
15 Removal of Foreign Bodies from Hand or Foot. J. B. Nias.
16 Second Attack of Typhoid Fever: Perforation: Laparotomy: Death. E. S. Moorhead.

1. **Experiences in Abdominal Surgery.**—Paul discusses in an interesting manner gastrostomy, pylorectomy, pyloroplasty, gastroenterostomy, hour-glass stomach, perforating ulcers, appendicitis, enterectomy and colectomy, and colotomy. He considers gastrostomy only beneficial when the air passages are threatened or starvation is imminent. Other forms of obstruction of the esophagus than those from cancer are rare and usually yield to bougie treatment. The operation is not curative, only occasionally prolongs life, but saves much suffering. The only two methods Paul thinks of much consequence are Franks' method and Senn's modification of Kader's operation. The chief points requiring consideration are danger to life and risk of leakage of gastric contents through the fistulous opening, and on both counts Paul prefers Senn's method. He emphasizes the importance of nursing and illustrates the damage that may be done by an inexperienced nurse, for instance, with a drainage tube. So long as a growth is not in a position to involve the larynx or trachea and the patient can swallow milk gastrostomy is not called for. There is a limited sphere of usefulness for pylorectomy. Cancer of the stomach is much more malignant than cancer of the bowels and infects the glands earlier, so that circumstances are against pylorectomy becoming a favorite procedure under present conditions. Pyloroplasty, too, has not justified the early enthusiasm over it; it may be serviceable when a dilated stomach is associated with a tight or hypertrophied pylorus. Paul has long given up every modification of Loreta's dilating operation; in bad cases it is dangerous and inefficient in all. It may be considered in cases with no definite stricture and only some slight thickening of the pylorus. In regard to gastroenterostomy, Paul utters a note of warning against over much surgical enthusiasm, not, however, to decry so valuable an operation.

With regard to the site of operation, although the weight of opinion has been given in favor of posterior operation, Paul is not so certain that a sound result has been arrived at. He selects whichever operation seems likely to be of most service to the patient. After the operation the stomach is left entirely at rest. For two days nothing is swallowed; feeding, he states, is harmful and unnecessary. The one serious fault of gastroenterostomy is regurgitation. He feels sure that vicious circle is due not to faulty detail or method, but to doing the operation when it is not required. It results from a want of sufficient expulsive effort on the part of the stomach, together with facilities for a continuous circuit of fluid out of the stomach by the pylorus and back by the new opening. Contrary to the increasing opinion, in regard to hour-glass stomach, Paul retains the old belief in the congenital origin of certain cases. In the absence of other mischief Paul does a gastroplasty by Kammerer's method. In regard to perforating ulcer he demands that surgeons shall have the chance of operating early. For appendicitis he continues to advise the interval operation whenever possible. He thinks that there is a sphere for lumbar colotomy.

2. **Cholecystectomy.**—Robson's experience does not support the view advanced by some, that the gall bladder is a useless if not a dangerous organ, and should be dealt with in a summary fashion as we deal with the appendix. He further urges that gallstones, though usually forming in the gall bladder, may arise in any part of the biliary apparatus both within and outside of the liver. It is a question whether the loss of a gall bladder does not lead to a dilatation of the common duct so as to replace to a certain extent the reservoir function of the gall bladder. That this has occurred in some cases Robson knows from personal experience. This would necessarily lead to back pressure, and sufficient time has not elapsed since the adoption by some enthusiasts of cholecystectomy as a routine procedure to show whether or not the liver is injuriously affected by back pressure and absorption. In ordinary cases of cholelithiasis, cholecystotomy with drainage of the gall bladder is a safe and efficient operation, and if the ducts are clear there need be no fear of fistula or of recurrence of gallstones. Robson considers cholecystectomy indicated in the following conditions: 1. In cancer or other new growth of the gall bladder when the disease is local and limited. 2. In contracted or useless gall bladder the result of repeated attacks of cholecystitis. 3. In dilated or hypertrophied gall bladder resulting from obstruction in the cystic duct: (a) always, if resulting from strictures; (b) usually, if resulting from impacted gallstones which may have induced ulceration that will subsequently lead to stricture; (c) usually, if resulting from kinking of the cystic duct or from adhesions. 4. In phlegmonous or gangrenous cholecystitis. 5. In empyema of the gall bladder. 6. In calcareous degeneration of the gall bladder. 7. In mucous fistula of the gall bladder, the result of stricture or other obstruction of the cystic duct. 8. In gunshot or other serious injuries of the gall bladder or cystic duct. His practical conclusions are that since there is an undoubted relation between cholelithiasis and cancer of the gall bladder, and since gallstones produce characteristic symptoms, and their removal before complications entails less than 1 per cent. risk, notwithstanding that the symptoms may often be relieved for a time by general treatment, the true preventive treatment is removal of the source of irritation by the simple operation of cholecystotomy.

3. **Anastomosis Between the Common Bile Duct and the Duodenum.**—Fullerton reports a case in which a huge dilated common bile duct was anastomosed with the first part of the duodenum. The patient had been suffering from chronic pancreatitis with complete occlusion of the duodenal opening of the common bile duct. His recovery after the ducts had been so blocked that all trace of bile had disappeared from their contents, is remarkable.

5. **Operation for Intracranial Tumor.**—Russell goes at length into the importance of being sure of the diagnosis of intracranial tumor before recommending operation, and discusses the details of diagnosis at some length. A careful selection of suitable cases for operation is necessary to change the attitude of distrust in the profession. He considers the question of operation: 1, in the hope of effecting a cure, and, 2, for relief of symptoms and prolongation of life. With regard to the first condition, it is obviously of extreme importance that the diagnosis of tumor should be supported by evidence which enables its accurate localization to be determined. Though the data at our command may be so satisfactory and complete as to enable us to localize the seat of the tumor with the greatest certainty, it may yet be impossible to recommend an operation, owing to the inaccessibility of the neoplasm. The probable nature of the growth whose removal is to be attempted, must of necessity influence the question, for we not only aim at successful removal of the tumor and recovery of the patient from the operation, but hope that the removal will be so complete that the new growth will not recur. Therefore the question of malignancy has an important bearing. The more circumscribed the malignant tumor the better the chances of cure, and vice versa. There are also chronic syphilitic tumors entirely unalterable by mercury and iodid. Operation on accurate diagnosis is called for here. The probable effects of the operation and the degree of risk therefrom to life are also of primary importance. For the avoidance of shock Russell approves trephining and the removal of the bone at the first operation, leaving the opening of the dura and the removal of the tumor until some days later, thus dividing the element of shock. Since this division of the operation has been adopted it has become exceptional to hear of deaths from shock following the operation. In competent hands the risks from hemorrhage are slight. The amount of permanent defect that may result from operation must be considered. Some paralysis is likely to occur or be added to that already existing, but recovery from at least a part of the added paralysis may be confidently predicted. Aphasia is a more serious problem and an alternative that many may consider worse than death itself. With regard to the second condition, the benefit of trephining, if a sufficiently large area of bone is removed to relieve the intracranial pressure, is unquestionable. It is generally useless when the patient is deeply comatose or the heart has failed, but should be attempted if the heart continues to beat even though respiration has entirely failed. Russell endorses all that can be said in support of the operation as a means of arresting the progress of optic neuritis and of saving sight, but the origin of the optic neuritis must be considered, for if it is toxic, trephining would be worse than useless. While useless for cure, lumbar puncture must be considered for the relief of symptoms and for diagnosis; particularly in regard to general paralysis of the insane.

7. **Tuberculin Treatment of Tuberculosis in Children.**—Riviere, as the result of his own experience, has found tuberculin in suitable doses an almost certain remedy in localized tuberculosis. Patients with tuberculosis accompanied by symptoms such as phthisis and tuberculous peritonitis are certainly benefited in most instances. Nearly all patients with tuberculous peritonitis improve rapidly. One patient going persistently down hill for months began to improve directly tuberculin was given and is now well. General symptoms and a fluctuating or high opsonic index are in themselves no bar to tuberculin treatment. The most unpromising condition is marked wasting. The effect of tuberculin on secondary infections is remarkable. Riviere strongly urges its wider use on modern lines in children. From personal experience he considers from one twelve-thousandth to one eight-thousandth of a milligram suitable for a child of one year; one four-thousandth of a milligram for a child of 5 years, and one three-thousandth for children of 10 or 12 years, as average doses.

8. **Acute Pancreatitis.**—Osler's paper recognizes two groups, one with distinct enlargement of the glands, another with suppuration or necrosis. The causes are threefold: 1, Mechanical; 2, chemical, and 3, infected. He considers these conditions at length. The diagnosis of acute pancreatitis is often impossible. Death occurs as a rule three or four days after the onset. The urine and stools are characteristic, the latter containing fragments of necrotic pancreas or the typical excess of fat. Ninety per cent. of those not operated on die; more than 50 per cent. of those operated on recover. Gallstone cases are particularly fatal.

11. **Pericarditis.**—West discusses in detail the symptoms and treatment of pericarditis. Pain may be due to friction or be of cardiac origin. Cardiac pain is rare and is met with only with acute cardiac dilatation. Friction is the most characteristic sign and when present is conclusive. Cardiac dulness is always increased. One of the earliest signs is said to be such increase toward the left base. West considers this due not to effusion but to dilatation of the left auricle. The difficulty of diagnosis, even by most competent diagnosticians, between pericardial effusion and cardiac dilatation is proved by the experience of paracentesis. Systolic recession of the apex beat is pathognomonic of adherent pericardium when present, but the converse is not true. Effusion muffles the heart sounds, but they may be equally weak from dilatation only. A perverted pulse respiration ratio is often as marked in acute pericarditis as in acute pneumonia. True pulsus paradoxus is very rare, except with mediastino-pericarditis; however interesting, it is of no practical use in diagnosis. When effusion is large there may be bulging or prominence of the epigastric region with pulsation that can be seen and felt, also displacement of the left lobe of the liver. West can not understand the objection to opium in heart affections. He has used it largely and has never seen anything but good follow its judicious administration. Paracentesis is rarely necessary in pericardial effusions of rheumatic origin, which are always serious. When effusion is purulent further procedure will be necessary, but paracentesis must precede incision, for there is no other way of ascertaining the nature of the effusion.

13. **Rheumatoid Arthritis.**—Luff considers that although there are several infective diseases of the joints somewhat resembling it, yet rheumatoid arthritis is a distinct clinical entity, distinguishable from other forms of arthritis. It is a constitutional disease not a local one, probably due to micro-organisms circulating in the blood, which find a suitable nidus for development in the joints. Monoarticular rheumatoid arthritis is, in Luff's opinion, always traumatic in origin and due to degenerative changes in the joints, the result of chronic inflammatory processes. Comparatively slight injury to a joint may lead to rheumatoid arthritis and result in extension to other joints. Previous gonorrhea, gout, or debilitating disease may predispose. The most useful drugs Luff has found to be guaiacol and potassium iodid. His experience in over 3,000 cases leads him to consider guaiacol capable of arresting the disease, diminishing the size of the joints, permitting increased movement, and markedly relieving pain. He recommends from 5 to 10 grains of the carbonate three times a day, increasing the dose from 1 to 3 grains each week, until 15 to 20 grains are taken in each dose. Superheated air and electric light baths are beneficial; douche massage is effective. Dry heat benefits, whereas cold damp increases the disease. Seaside resorts are not suitable.

14. **Wasp's Sting.**—Atkinson describes a case of a woman stung in the foot by a wasp at 7:45 a. m. This was followed rapidly by itching all over, a sense of swelling from head to foot, abdominal pain, desire to defecate, the bowels acting before she had time to reach the toilet room adjoining the bedroom. She became unconscious. By 9 a. m. the whole body was irregularly convulsed; pupils were normal, reacting to light; corneal reflex was not affected; a dark rash like that of measles appeared all over the body; the hands and finger tips were livid; the face was congested; the eyes were suffused; there was constant nausea and some dyspnea; the skin was cold and the pulse feeble. By 2 p. m. the rash had disappeared. At 9 p. m. she was covered from head to foot with a bright scarlet rash and there were extensive wheals on the back and hips. Recovery ensued the following day. He asks if all this trouble could arise from the sting of a wasp.

Lancet, London.

October 26.

17 *Factors of Insanity. G. H. Savage.
18 Mobility of the Kidneys. H. Mackenzie.
19 Roentgen Rays as Aid to Diagnosis of Stricture of Esophagus. B. Dawson.
20 *Combined Disease of Mitral, Aortic and Tricuspid Valves. T. W. Griffith.
21 *Compulsory Notification of Tuberculosis. N. Raw.
22 Treatment Before and After Operation of Thirty-eight Consecutive Successful Prostatectomies by Freyer's Method. R. J. Willan.
23 Two Cases of Acute Spreading Gangrene, with Note on Bacteriology. R. R. James.
24 *A Case of Erythromelalgia. R. G. Hann.

17. **Factors of Insanity.**—Savage sums up a forceful lecture in the following words: "It is not for everyone to become sane; there is no one standard of sanity and there is no one pathology. There is, therefore, the personal factor in every case of insanity; next the dissolution of the mental faculties explains many but not all the forms of insanity. The result varies with the rate of dissolution, and with the cause and general conditions of the person suffering. The symptoms rarely depend on dissolution alone; besides the loss of the higher faculties there may be developments of the remaining faculties leading to variations in the results."

20. **Combined Mitral, Aortic and Tricuspid Disease.**—Griffith records a remarkable case. He remarks that we must not consider it essential to a diagnosis of tricuspid stenosis that a direct bruit, diastolic or presystolic in rhythm, should be made out, or we shall overlook the lesion many times. While, therefore, valuable positive evidence when present, he regards such bruits as not essential and feels that the diagnosis may safely be made on a combination of other signs. He entirely dissents from the view of Peacock and Rosenstein, that tricuspid stenosis is almost always of congenital origin and agrees with Bedford Fenwick that tricuspid stenosis is in almost every instance an acquired and not a congenital condition. He considers the same true of the mitral and can not recall in twenty years of postmortem work any case of mitral stenosis at autopsy in an infant. The diagnosis of tricuspid stenosis would be made more frequently if its possible occurrence in any long standing case of mitral stenosis were borne in mind. Years ago he stated that a diagnosis of tricuspid stenosis might reasonably be based on the following: 1. The presence in a case of mitral stenosis of a presystolic bruit, audible not only at the apex, but toward the lower part of the sternum; especially if there should be two points of maximum intensity, one at the apex and the other in the tricuspid area. 2. The development of such bruit in a patient who hitherto has presented the ordinary bruit of mitral stenosis. 3. Marked extension of cardiac dulness to the right of the sternum, indicating right or auricular enlargement, without much epigastric pulsation or other signs of considerable right ventricular enlargement. This might especially be expected in instances of great tricuspid stenosis with little or no regurgitation, but the existence of great right ventricular enlargement must not be accepted as strong evidence against tricuspid narrowing. 4. Marked fulness of the veins of the neck, without much pulsation in them would strengthen the suspicion. Here, again, the less the pulsation in such distended veins the narrower we may assume the tricuspid orifice to be, for the auricle will be less relieved by its contraction and there will be less regurgitation during the succeeding ventricular systole. 5. The supervention of dropsy and of albuminuria in a patient suffering from apparently simple mitral stenosis. This may arouse suspicion, for these affections are not common unless there is considerable regurgitation associated with the stenosis, but it should not do more than this, for dropsy and albuminuria may result from right-sided failure in mitral narrowing without tricuspid stenosis.

21. **Notification of Tuberculosis.**—Raw recommends the following measures in regard to the control of tuberculosis: 1. Municipal dispensaries; notification of all "open" cases. 2. Health visitors. 3. Regulations against tuberculous persons handling food. 4. Inspection of milk and meats. 5. Improved dwellings; ventilation; air space. 6. Destruction of expectoration. 7. General sanitary measures. 8. Disinfection of houses after death. 9. Inspection of hotels and boarding houses. 10. Separation of children from consumptives with, if necessary, compulsory notification. 11. Isolation of advanced cases. 12. Hospitals for treatment. 13. Voluntary notification.

24. **A Case of Erythromelalgia.**—Hann's case showed three clearly defined stages of the disease: 1. A premonitory one of severe pain, now better, now worse, without swelling or redness. 2. An acute stage of the severest pain, worse in the dependent position, with a tender, pink, puffy swelling. 3. A chronic condition with slighter pain except on using the limb (attacks no longer spontaneous), with tenderness only on deep

pressure, and a brown-red swelling. In the hands this last stage was represented by slight tenderness without swelling or discoloration. Treatment was unsatisfactory.

Medical Press and Circular, London.

October 23.

25 *Uremic Meningitis. R. Lepine.
26 Medical Aspects of Spinal Curvatures. G. W. F. Macnaughton.
27 Postoperative Intestinal Obstruction. R. J. Johnstone.
28 Hemorrhagic Rashes. G. Pernet.

25. **Uremic Meningitis.**—Lepine reports three cases which, notwithstanding the absence of anything in medical literature bearing on the question, lead him, reasoning from the frequent association of pericarditis with uremia, to ask whether or not there is such a thing as uremic meningitis. At autopsy the first patient presented marked thickening of the meninges over the convexity, apparently due to the uremia. In the two other cases the symptoms pointed to meningitis and recent lesions were discovered at autopsy. Unfortunately, no histologic examination of the meninges was made. Lepine thinks that inflammatory lesions are produced in only chronic uremia.

Intercolonial Medical Journal of Australasia, Melbourne.

September 20.

29 European Eye Clinics. J. P. Ryan.
30 *Case of Cirrhosis of Kidney, Showing Wide Range of Blood Pressure Due to Concealed Intestinal Hemorrhage. W. H. Summons.
31 *Lee-Metford Bullet in Right Bronchus—Operation—Recovery. R. B. Duncan and H. R. Duncan.
32 *Two Cases of Puerperal Sepsis Treated by Vaccines. H. C. Lloyd.
33 Spontaneous Cure of a Fibroid. E. J. Robert.
34 *Normal Plasma in Lactation. D. M. Paton.

30. **Cirrhosis of Kidney with Wide Range of Blood Pressure.**—Summons' case exemplifies the following points: 1. The great fall of blood pressure due to a large internal hemorrhage. 2. That recovery is possible after a fall in blood pressure of 80 mm. Hg in a patient with a red granular kidney, and a more or less spoilt myocardium. 3. That no albumin was detectable in the urine, and that the quantity was only 15 ounces, while the blood pressure was only 130 mm. Hg. 4. The marked delirium and loss of mental power due to the brain anemia. 5. The length of time a patient with granular kidneys may live after the first cardiac failure.

31. **A Bullet in the Right Bronchus.**—The authors report the case of a schoolboy, 7 years of age, who inspired an oblong rifle bullet during a fit of coughing. He had various attacks of dyspnea and lividity and was treated at home for right basal pneumonia. A diagnosis of impaction of the bullet in the lower primary division of the right bronchus was confirmed by a skiagram. The bullet was removed by posterior mediastinal thoracotomy. To fix the exact position of the bullet by thrusting the blunt point of a needle into the substance of the lung, though risky, seemed the only plan available under the circumstances, and it was justified by almost immediate success. It was interesting to note the relative impunity with which the root of the lung and, in fact, all the important structures could be handled. A point of some importance is the preservation of the erector spinæ muscle, the transverse section of which must mean considerable disability. The sawn ribs were not wired. The parts fell naturally into very accurate position, and with careful suturing of the soft parts, the after results were all that could be desired. The after history of the case was practically uneventful.

32. **Puerperal Sepsis Treated by Vaccines.**—Lloyd reports two cases of puerperal sepsis in which improvement followed quickly on the injection of a vaccine made from the blood of the patient. Lloyd has not noted any good results in such cases after the use of antistreptococcic serum. While it is debatable how much of the improvement in the last case (since the patient left hospital contrary to advice and before entire recovery) was due to the vaccine he considers that: With a profound general infection and a total absence of organisms after use of the vaccines, with the greater remissions of temperature occurring during their use, and the fact that the patient was so far on the road to recovery after so prolonged an illness, it is surely permissible to infer that their use was beneficial.

34. **Normal Plasma in Lactation.**—Paton divides deficient lactation into two classes: 1. Those cases in which the patient is in good health and the secretion fails entirely or ceases prematurely, or when the glands themselves are abnormal. 2. Cases in which the patient's ill health or lack of vitality is the cause of the deficiency. In the first class nothing known has any beneficial effect, but for the second class the normal plasma of the horse and sheep, according to Paton, has proved a sovereign remedy. His explanation is as follows: Without a doubt, there are present in the plasma the elements which the animal supplying it has elaborated for the maintenance of the vitality of its own tissues, and the results obtained point to the conclusion that these elements are transferred to the patient in such a condition as to enable them to produce in the patient the same results which they were intended to produce in the animal from which they were obtained. He reports eight cases. Normal sheep plasma, he says, is obtainable by any druggist, the dose being half an ounce taken in water with a few drops of any of the essential oils, for flavoring. The dose is given at first four times a day and gradually reduced till discontinuance. The tuberculous diathesis is no bar, and experience has led him, with the most satisfactory results, to extend its use to all cases of tubercle suitable for Wright's tuberculin treatment, and to all cases of lowered vitality in the very old and the very young, as well as to the same condition in all ages during convalescence from acute and wasting diseases.

Dublin Journal of Medical Science.

October.

35 Sleep. (Continued.) R. S. Oldham.
36 Diphtheria, Scarlatina and Measles, Their Relation and Coincidence. J. M. Day.
37 *Heart Block and Conduction of Cardiac Impulse. W. Pearson.
38 *What are Eosinophile Cells? F. Freytag.

37. **Heart Block.**—Pearson recounts the history of the study of heart block and says that it may be taken as proved that a lesion in the band of His is capable of producing heart block, but there are undoubtedly other factors which can also upset the normal cardiac rhythm, the most important of which are the vagi nerves. He considers that the conduction of the cardiac impulse is by means of nerve element (neurogenic) and not by muscle (myogenic). He concludes that technical agents, such as pressure, and chemical agents, such as drugs which act on the vagi nerve, can affect the heart's rhythm, as also can a diseased condition of the blood vessel in the floor of the fourth ventricle, such as a sclerosis or atheromatous changes. Heart block, then, may be attributed to causes which may exist at different levels of the nervous mechanism, but are always esentially nervous.

38. **What Are Eosinophile Cells?**—Freytag, as the result of investigation, concludes that the eosinophile cells are leucocytes which contain iron taken up from erythrocytes. The eosinophile cells afterward become pigment cells. The granulations of the eosinophile cells are the visible expression of their iron content.

Indian Medical Gazette, Calcutta.

October.

39 Cats as Plague Preventers. A. Buchanan.
40 Breeding Season of Rats and Epidemiology of Plague in Calcutta. H. M. Crake.
41 Further Experiments as to the Potency of Various Disinfectants Against Pulex Cheopis. W. C. Hossack.
42 Fever Associated with Spirochetes in the Blood. W. H. Kenrick.
43 Urine and Blood of Europeans and Bengalis. D. McCay.
44 *An Outbreak of Trichinosis in Garhwal. C. G. Thompson.
45 Incinerators in Cantonments. W. A. Morris.

44. **An Outbreak of Trichinosis.**—Thompson describes an outbreak of trichinosis in Garhwal, India, arising from eating raw boar flesh; 92 people ate of the food on February 19. On February 23 sickness began to overtake those who had eaten, so that by March 10, 64 men had been ill, of whom 23 had recovered and 11 had died, the rest being still sick. A government hospital assistant then took the outbreak in hand, with the result that no further deaths occurred and all patients did well. The treatment was a purgative of castor oil when there was any diarrhea and the following draught, twice daily: R. Carbolic acid, 1 minim; tincture of iron, 2 minims; glycerin, ½ dram; water, 1 ounce.

Australasian Medical Gazette, Sydney.

September 20.

46 Splenic Anemia. S. Jamieson.
47 Pneumonia and Its Treatment. J. Nicholson.
48 Case of Pancreatic Cyst. T. Fiaschi.
49 Sixty Cases of Appendicitis. C. MacLaurin.
50 Epidemic Influenza. A. C. F. Halford.
51 Case of Spinal Analgesia with Stovain. J. B. McLean.

Bulletin de l'Académie de Médecine, Paris.

October 8, LXXI, No. 33, pp. 211-222.

52 *Inflammatory Tuberculosis and Tardy Rachitis. (Les déformations ostéo-articulaires essentielles de la croissance sont souvent d'origine tuberculeuse.) A. Poncet and R. Leriche.

52. **Inflammatory Tuberculosis and Tardy Rachitis.**—Poncet refers to the frequency of softening of the bone in the vicinity of a focus of osteitis, and argues that infectious conditions in general, subacute or chronic, may be capable of producing local softening of the bone in case the germs are not virulent enough to induce destructive lesions or necrosis. This explains how coxa vara or genu valgum might develop in consequence of some abortive osteomyelitic process in the femur, especially of tuberculous origin. The bacillary infection is so attenuated that no characteristic lesion results, merely a softening of the bone followed by condensing osteitis, but this is ample to explain all the malformations of bones and joints that are generally ascribed to growing too fast, such as scoliosis, genu valgum, painful flatfoot and coxa vara. It also explains the cases which have been accepted as a primary rachitis occurring tardily. In reality they are the work of this inflammatory tuberculosis, appearing under unaccustomed aspects. It is notwithstanding a menace for the future, and indicates therapeutic measures both for prophylaxis and for treatment. Poncet's previous communication on the subject of this attenuated tuberculosis of the skeleton was summarized in THE JOURNAL, Feb. 23, 1907, page 738.

Presse Médicale, Paris.

October 12, XV, No. 82, pp. 649-656.

53 *Potatoes in Diabetic Diet. (Pommes de terre dans le régime des diabétiques.) M. Labbé.
54 Technic for Making Walking Apparatus for Fractured Leg. (Pose de l'appareil de marche dans les fractures de jambe.) M. Vivier.

October 15, No. 83, pp. 657-672.

55 *Relations Between Pancreatitis and Biliary Lithiasis. (Syndrome pancréatico-biliaire. Le drame pancréatique. Cytostéatonécrose et hémorragies pancréatico-péritonéales.) Dieulafoy.
56 *Typhoid Fever and Ulcerations of the Soft Palate. (Fièvre typhoïde et ulcération de Duguet.) M. Letulle.

October 16, No. 84, pp. 673-680.

57 Variations in Water in the Organism During Inanition. (Variations de l'eau dans l'organisme des inanitiés.) H. Roger.

53. **Potatoes in Antidiabetic Diet.**—As mentioned in THE JOURNAL, November 9, page 1616, Labbé has been studying the comparative tolerance of diabetics for potatoes. In six out of seven cases the starch in potatoes was much better tolerated than bread, and only once was the latter better assimilated than the potatoes. In comparison with milk and sugar, he found that potatoes are far better tolerated, while they proved to have several advantages over wheat flour and pod vegetables. In equal weights of potato and bread the potatoes contain from two to three times less carbohydrates than the bread. A single potato at a meal represents from 100 to 200 gm. a day, that is, only from 20 to 40 gm. of carbohydrates, although the bulk of the potato is more satisfactory to the patient than the equivalent small amount of bread. Other advantages of potatoes in an antidiabetic diet are that they allow large amounts of butter, etc., to be incorporated with them, also the variety of ways in which they can be cooked. The amount of potatoes allowed the patient should be kept within the limits of his tolerance for carbohydrates.

55. **Relations Between Pancreatitis and Biliary Lithiasis.**—Dieulafoy declares that persons with biliary lithiasis are liable to acute and chronic pancreatitis, sclerous and stenosing pancreatitis causing compression of the common bile duct and of the pancreatic duct, cirrhosis of the pancreas simulating cancer, suppurative and gangrenous pancreatitis and the "pancreatic drama" simulating acute peritonitis and perforation of abdominal organs, sudden development of fat necrosis and pancreatico-peritoneal hemorrhage. He describes a number of examples of these various complications. In one case a patient had had jaundice for 67 days, although a gallstone—a complete cast of the common bile duct—had been expelled on the thirtieth day. This put an end to the gallstone colic, but the jaundice persisted owing to a concomitant sclerous pancreatitis causing stenosis. Drainage of the hepatic duct, diverting the bile outward, was followed by complete recovery. Frequently the pancreatic complication is overlooked, although Kehr found it in a third of his gallstone operations and Quénu has collected 118 cases of pancreatitis associated with biliary lithiasis. The "pancreatic drama" has an onset as sudden and as severe as acute peritonitis from perforation of the stomach, intestine or gall bladder, the syndrome including vomiting, anguish and tendency to collapse. Search must be made for gallstone antecedents, and a tendency to jaundice, especially if the pain and the "muscular defense" are most pronounced above and to the right of the umbilicus. Operative treatment is indicated in any event, but the pancreatitis must not be overlooked. It is remarkable, Dieulafoy adds, that cancer of the pancreas and of the ampulla of Vater and pancreatic lithiasis have never been known to induce this "pancreatic drama" except in a single instance, and in this case the gall bladder was found gorged with gallstones and infected. He gives illustrations of the microscopic findings in the feces in case of the "pancreatic deficit," showing the absence of crystals of fat acids and of saponified matters, while the field is almost covered with droplets of fat and undigested muscle fibers.

56. **Typhoid Ulceration of Soft Palate.**—Letulle says that examination of the throat of typhoid fever patients day after day will reveal in a number of cases a pathognomonic lesion which he calls the ulcerative sore throat of typhoid fever. It is not painful, and generally passes unobserved unless sought for. Round or oval ulcerations, or rather "exulcerations," will be seen on the pillars or uvula, or both, but never covered with false membranes nor pus, and the angina heals in the course of from eight to twelve days. Usually there are only one or two patches of ulceration, but in a case illustrated, there were seven. This ulceration may be noted in some cases before the Widal test is positive, and it never develops later than the fifteenth day. He has encountered this condition in sixty cases of typhoid fever, and his experience suggests that it is more frequent in the milder forms. It occurs in about one in six or eight cases of typhoid fever and has never been observed in the paratyphoid cases. The aspect is unmistakable, the loss of substance showing yellowish or pinkish gray.

Semaine Médicale, Paris.

October 23, XXVII, No. 43, pp. 505-516.

58 *Non-diphtheric Membranous Croup. (Des laryngites aigues à fausses membranes non-diphthériques.) M. Jacod.

58. **Non-Diphtheric Membranous Croup.**—Jacod reviews the literature on the subject of membranous croup independent of the diphtheria bacillus, and states that only 6 authentic cases are on record, to his knowledge. He then announces that last winter he encountered 9 cases in the diphtheria ward in the course of two or three months. The clinical picture was that of membranous croup, while from three to seven bacteriologic tests of the false membranes failed to disclose the diphtheria bacillus in a single instance. There were only 5 immediate deaths in the group of 15 cases, but 2 of the patients succumbed later to complications and another required intubation permanently. Those patients who recovered were sick only a few days. None of the patients had any symptoms of coryza, but the temperature was much higher than in diphtheric croup, and the glands in the neck were not swollen or tender. The infection seems to affect the entire respiratory tract from the start, so that the symptoms on the part of bronchi and lungs were prominent from the first. The entire larynx and lungs were seen to be involved in the 5 cases in which autopsy was possible. The false membranes extended to the bifurcation and even into the large bronchi, while the lungs were congested, with foci of bronchopneumonia. Wherever the tube had rubbed there was ulceration. Unless there is marked relief from expulsion of false membranes early, the patient does not seem to be relieved by intubation and injection of antidiphtheria antitoxin; the temperature remains high

and the pulmonary symptoms predominate. In the 9 cases the pneumococcus was found once, Martin's small coccus in 2 cases, the staphylococcus, almost alone, in 5 cases, in 2 the streptococcus, and in 4 mixed infection from two or more of the above. In the presence of such bacteriologic findings the physician is practically disarmed, unless he should try some antistreptococcus or other curative serum. No benefit was apparent in the cases in which diphtheria antitoxin was injected. The physician is practically restricted to local treatment, as before the advent of diphtheria antitoxin, with measures against the bronchopulmonary lesions, including local revulsion, subcutaneous injections of camphorated oil, warm baths (36 to 37 C., 96 to 98 F.) every three hours and, possibly, inhalation of oxygen. Tracheotomy was done in 3 cases and these 3 patients recovered, while there were 5 deaths and 2 patients left dependent on the tube among those who were intubated. Only 7 of the total 15 patients recovered; 2 were adults, the rest children under 8.

Beiträge zur klinischen Chirurgie, Tübingen.

LII, No. 3, pp. 561-780.

59 Two Cases of Central Dislocation of the Femur. E. Wolff.
60 Dislocation of the Cuneiform Bone. (Keilbeinluxationen.) A. Haffner.
61 Congenital Hour-glass Stomach with Stenosis of the Pylorus. (Angeborener Sanduhrmagen.) M. Flammer.
62 Injuries of the Vessels in Traumatic Separation of the Epiphysis. (Gefässverletzungen bei traum. Epiphysenlösungen.) M. v. Brunn.
63 Fibroma of External Meniscus of the Knee. Id.
64 Treatment of Appendicitic Abscesses. Id.
65 *Local, Subcutaneous and Subdural Application of Anti-tetanus Serum and Prophylaxis of Tetanus. F. A. Suter.
66 Traumatic Rupture of Hydronephrosis. R. Oehme.
67 Osteoplastic Resection of Lower Third of Tibia and Fibula. Retaining the Foot. (Resektion des unteren Unterschenkelendes.) W. Kausch.
68 Subfascial Lipoma of the Neck. (Tiefgelegene Lipome des Halses.) G. Hirschel.
69 Remarkable Metastasis of a Sarcoma in a Child's Kidney. H. Flörcken.
70 Consequences of Traumatic Abortion. (Folgen des traumatischen Abortus.) K. Fischer.
71 Backward Disocation of Lower Jaw, and Treatment of Habitual Dislocation of the Jaw. (Verrenkung des Unterkiefers nach Hinten.) von Hacker.

Supplementary No., pp. 1-211.

72 Report of Heidelberg Surgical Clinic for 1905.

65. **Serum Treatment of Tetanus.**—In three cases reported, antitetanus serum was applied locally to the wound, while at the same time 100 units were injected subcutaneously and 20 units were injected under the dura of the cord by lumbar puncture. All the patients recovered, but virulent tetanus bacilli can still be cultivated from the small granulating wound in one case, nearly three months since all symptoms disappeared. Suter remarks that this is of no import to the patient, as he is immune to tetanus now, but it imposes extra caution in burning the dressings, etc., used by the patient. He knows of 22 cases in which tetanus developed after prophylactic injections, but is inclined to think that a more liberal use of the serum might have had better results. In his local treatment of the wound he keeps it constantly moist with fluid serum applied on a tampon, renewed daily, the subcutaneous injection is also repeated daily and the subdural every second day. The wound in each of these cases had been treated with Peruvian balsam at first.

Berliner klinische Wochenschrift.

October 14, XLIV, No. 41, pp. 1289-1330.

73 To Render the Complements Durable. (Haltbarmachung der Complemente.) E. Friedberger.
74 *Histologic Changes in the Gastrointestinal Canal in Pernicious Anemia. (Histologische Veränderungen am Magen-Darmkanal bei perniciöser Anämie.) R. Oestreich and H. Strauss.
75 *Essential Over-production of Red Corpuscles and Secondary Over-production. (Erythrämie und Erythrocytose.) H. Hirschfeld.
76 Percussion of the Apices of the Lungs. (Perkussion der Lungenspitzen.) Goldscheider. Commenced in No. 40.
77 *Abducent Paralysis After Lumbar Puncture Alone. (Zur Frage der Abducenslähmung nach Lumbalanästhesie.) H. Wolff.
78 Opening of Peritonsillar Abscesses. A. Meyer.

74. **Histologic Gastrointestinal Changes in Pernicious Anemia.** Oestreich and Strauss believe that the increase in lymphocyte tissue which they have observed in the digestive tract in cases of pernicious anemia has some special relation to the disease. The increase in the lymphatic tissue in the digestive tract, especially in the stomach, is often paralleled by increased numbers of lymphocytes in the circulating blood. They found this condition pronounced in 12 out of 24 cases of pernicious anemia.

75. **"Erythremia" and "Erythrocytosis."**—Hirschfeld applies the first of these terms to a condition in which there is pathologic overproduction of red corpuscles, usually called polycythemia, with enlargement of the spleen. The bone marrow showed enormous hyperplasia in the 5 cases that have come to autopsy, with plethora vera. The condition is a twin to leukemia; in the former the erythroblastic apparatus is the one at fault and in leukemia the leucoblastic apparatus. For this reason he urges the use of the term erythremia to match with leukemia. He suggests the term erythrocytosis for those conditions in which the overproduction of red corpuscles is not the essential feature of the disease, but merely a transient or secondary symptom.

77. **Abducent Paralysis After Lumbar Puncture Alone.**—Wolff describes a case in which an operation on the knee was to have been done under spinal anesthesia, but instead of clear fluid dropping from the needle when it was inserted as usual, between the third and fourth lumbar vertebræ, apparently pure, fresh blood dripped from it and no attempt was made to inject an anesthetic; chloroform was given and the operation done under general anesthesia. A few hours afterward the patient complained of violent pain in the back, radiating to shoulders and chest, with, the next day, headache and pain in the back of the neck, which persisted to the sixth day. The fifth day after the operation abducent paralysis in the right eye developed, which persisted unmodified for a week and then gradually subsided to merely traces of paresis by the end of the sixth week. Otherwise the patient felt well. No appreciable amount of cerebrospinal fluid had escaped in this case, so fluctuations in the pressure could not have been the cause of the paralysis. Some vessel had been injured by the needle in making the puncture and Wolff is inclined to believe that an intradural hematoma had formed, or possibly the blood entering the spinal canal had irritated the meninges. He has been experimenting since with dogs, injecting blood taken from the radial artery into the spinal canal, but has had no conclusive results to date. This assumption explains why the paralysis requires several days before it develops, which has always been observed in the cases on record. The gradual dissolution of the hematoma releases toxic substances which then act on the abducent center or nerve in its intradural course or at its emerging point. Lumbar puncture may induce hemorrhage even when no injury of a vessel has been noticed, as has been demonstrated several times.

Centralblatt für Chirurgie, Leipsic.

October 12, XXXIV, No. 41, pp. 1193-1224.

79 *Intravenous Adrenalin-Saline Infusion in Treatment of Falling Blood Pressure in Peritonitis. (Behandlung der peritonitischen Blutdrucksenkung mit intravenösen Adrenalin-Kochsalzinfusionen.) H. Hoddick.
80 Nutritional Disturbances in the "Connecting Loop." (Ernährungsstörung der "Verbindungsschlinge.") C. Lauenstein.

October 19, No. 42, pp. 1225-1256.

81 Anastomosis Between the Biliary Passages in the Liver and a Loop of the Small Intestine. (Hepato-Cholangio-Enterostomie bei Aplasie aller grossen Gallenwege.) O. Ehrhardt.

79. **Treatment of Peritonitic Reduction of Blood Pressure with Intravenous Suprarenal-Saline Infusions.**—Hoddick states that this measure was introduced at Heidenhain's clinic two years ago and has been extensively used, with constantly increasing satisfaction. It was adopted after the death of a colleague who succumbed in collapse—cyanosis, sweating and uncontrollably falling blood pressure—a few days after appendicectomy. The falling of the blood pressure in peritonitis is due to a central vasomotor paralysis, he thinks, rather than to injury of the heart action. Intravenous injection of from three pints to a quart of physiologic saline solution, to which from six to eight drops of adrenalin have been added, has a surprising effect in the threatening cases in which alone the measure is applied. During the infusion the gradual rise of the pulse can be distinctly observed; the cyanotic tint of face and lips gives place to bright red and the drawn features smooth out. The infusion is made at a temperature of 41 C., allowing from 20 to 30 minutes for the injection. This meas-

ure is more powerful in its action, he declares, than any other known to date for the purpose. It seems to act directly on the paralyzed vasomotor center in the medulla. Before its adoption in the clinic the deaths outnumbered the recoveries in appendicitic peritonitis or all the patients died, but since its introduction there have been nine recoveries to one death. The infusion was never made more than twice on the same patient, and was sometimes applied before the operation. It was applied also in some cases of peritonitis from rupture of the small intestine or a puerperal process, the results being satisfactory also in these cases.

Centralblatt für Gynäkologie, Leipsic.

October 12, XXXI, No. 41, pp. 1225-1256.

82 Ventrofixation. (Ventrifixur.) R. Olshausen.
83 Noble's Surface Suture for Wounds of the Fascia. (Flächennaht nach Noble bei Fascienwunden.) O. v. Herff.
84 Cumol-Catgut or Iodin-Catgut? Id.
85 Treatment of Casual Injuries During Pubiotomy. (Nebenverletzungen bei der Hebosteotomie.) P. Kroemer.
86 Incarceration of a Laminaria Tent in the Uterus. (Einklemmung eines Laminariastiftes im Uterus.) M. Stolz.
87 Parathyroidin in Treatment of Eclampsie. (Eklampsie und Parathyreoidin.) O. Kaiser.

October 19, No. 42, pp. 1257-1304.

88 *Koch's Old Tuberculin for Diagnosis in Gynecology. (Alttuberkulin Koch als Diagnostikum in der Gynäkologie.) Pankow.
89 *Case of Eclampsia in Consequence of Increased Intrarenal Tension. (Eklampsie infolge von erhöhter intrarenaler Spannung.) J. G. ter Braak and A. Mijnlieff.

88. Tuberculin as a Diagnostic Measure in Gynecology.—Pankow's experience with 32 cases in which tuberculin was used to determine the presence of tuberculosis was not much in favor of the tuberculin test in gynecology. In 75 per cent. of the cases the findings of the test coincided with the anatomic findings, but in the other cases they conflicted. He concludes that an entirely negative general and local reaction may be accepted as excluding in all probability a tuberculous process in the genital or urinary apparatus, but that the positive findings must be accepted with some reserve.

89. Eclampsia with Increased Tension in the Kidney.—The case reported was that of a young primipara who developed eclampsia after spontaneous delivery of a living child. The coma grew deeper after each convulsion, and the right kidney was seen to be very much enlarged and so painful that the patient reacted even in coma when it was palpated. The cyanosis increased, the pulse was 140 and pulmonary edema began to develop. An operation was refused by the family, and even venesection was omitted; nothing was done except that morphin was injected, with stimulants, ether, caffein, wet packs and hot-water bottles, inducing sweating. The coma gradually subsided and the general condition improved, the kidney gradually returning to normal size. The first day there had been almost complete anuria and the urine suggested acute hemorrhagic nephritis, but as the convulsion subsided and the kidney returned to normal size, the urine also became normal by the third day. The details of thirteen cases of eclampsia with increased tension in the kidney are tabulated; all the patients were treated by decapsulation except in the case here reported and one other, and with one exception the patients recovered. The conclusion seems to be that an operation is indicated in case of eclampsia with oliguria, urine containing blood and albumin, red corpuscles, tube casts and renal epithelium. At the same time, the present case demonstrates anew that the recuperating power of Nature must not be disregarded.

Deutsche medizinische Wochenschrift, Berlin.

October 17, XXXIII, No. 42, pp. 1721-1768.

90 *Treatment of Fractures. (Allgemeine Behandlung der Frakturen.) T. Tillmanns.
91 *The Displaced Right Kidney Fastened by Adhesions in the Wrong Place. (Die verschobene, an falschem Orte durch Verwachsungen festgelegte rechte Niere.) Riedel. (Commenced in No. 41.)
92 *Purulent Inflammation of Portal Vein with Appendicitis. (Pylephlebitis purulenta bei Perityphlitis.) M. Martens.
93 Portals of Entry for Tuberculosis. (Eingangspforten der Tuberkulose.) H. Ribbert.
94 Mydriatic Substances in Urine. (Vorkommen mydriatisch wirkender Substanzen im Harne.) J. Pal.
95 Hemoglobinophile Bacilli as Saprophytes. (Saprophytie in den Harnwegen.) C. Klieneberger.
96 Experiences with Quartz Lamp. (Erfahrungen mit der Qarzlampe.) Heymann.
97 Benzidin Blood Test. (Benzidinblutprobe.) O. Schumm.

90. Treatment of Fractures.—In this general lecture on the subject of fractures Tillmanns emphasizes the advantages of walking casts, especially the simple, stirrup-like iron frame embedded in the plaster up to the upper part of the leg, which raises the foot a little above the ground, the weight of the foot stretching the leg. In fracture of the thigh, the walking cast has to include the pelvis. He inculcates the principles never to leave on the fixation apparatus too long, and never to attempt to cure a fracture with a single fixation dressing. He is making it a practice more and more to refrain from energetic cleansing and disinfection of the wound, aiming to leave it in peace as much as possible, even in compound fractures. In case of pseudarthrosis, he advocates opening the wound and removing the cause preventing due healing. The article is illustrated, showing his long steel screw for fractures, casts, jointed splints, etc.

91. The Displaced Kidney Held by Adhesions.—Riedel states that he has encountered 130 cases in which the right kidney was fastened by adhesions in an abnormal position. Only seven of the patients were men. He describes the clinical picture liable to be induced in such a case, but remarks that when a tumor develops in the kidney region, accompanied by vomiting and violent pain, the trouble is generally the result of acute exacerbation of a hydronephrosis. If it is aseptic there is no fever and the urine remains normal, but if there is infection, both fever and albuminuria are noted. This intermittent hydronephrosis is similar to the conditions in a gall bladder that contains stones and considerable serous fluid. In another group of cases violent pains and vomiting may suddenly develop, without fever or changes in the urine, the disturbance being due to the displaced right wandering kidney which has become fastened down in some abnormal position by adhesions, although normal in other respects. In about half the number of cases the liver is displaced also to such an extent that it occupies the kidney's normal place. He thinks that the pressure from the skirt bands is liable to cause displacement of the kidney. This occurs more frequently among women who do not wear corsets. The different conditions in regard to adhesions explain the varying clinical pictures observed. In some cases he found a stricture in the appendix or its obliteration evidently responsible for frequent, uncontrollable vomiting. All disturbances vanished after appendicectomy, but in other cases the symptoms persisted after the operation on the appendix, yielding only when some apparently insignificant adhesions were broken up and the kidney restored to place. In one case there had evidently been a preceding liver affection which had left numerous adhesions, and a mesenteric peritonitis in another. In such cases the wandering kidney was scarcely responsible for the adhesions. When there were no adhesions between the liver and the anterior abdominal wall or diaphragm and no signs of mesenteric peritonitis, the wandering kidney, displaced toward the median line and fastened there, was evidently the cause of the adhesions, with the resulting symptoms, pains suggesting gallstones or abdominal colic, headache, vomiting and emaciation. All these disturbances ceased when a few adhesions were broken up and the kidney fastened in its normal place. In conclusion he remarks that he does not know of any operation that is so beneficent in its results as fixation of a displaced kidney fastened by adhesions, while in case of a movable wandering kidney he does not advise intervention unless it causes considerable disturbance.

92. Purulent Appendicitic Inflammation of the Portal Vein.—Martens reviews the history of this rare complication of appendicitis and relates the particulars of two cases, both of which terminated fatally. In the first the portal vein was found full of pus to its last ramifications, with multiple small abscesses in the liver. The appendix had been removed in an attack of acute inflammation, but high fever and violent chills persisted. The liver region was only slightly tender, but the rapid decline of the patient, with unimpaired consciousness, and the slight objective findings were most remarkable. After five or six weeks repeated puncture of the liver revealed two abscesses, but the patient succumbed. In the second case the appendix was removed forty hours after the first symptoms of trouble, but incipient gangrene was already installed. After three days of convalescence, chills and fever developed, with

slight jaundice, general weakness and moderately distended abdomen, and the patient died in the third week. The portal vein was found full of pus, with numerous minute abscesses in the liver. In another case the same symptoms developed, several months after the appendix had been removed by an interval operation. An abscess was found behind the liver, and later two in the liver. After their evacuation the patient gradually recovered and is now in good health. Sprengel has collected a number of such cases occurring a long time after the primary appendicitis. When appendicitis is accompanied by chills, immediate operation, he asserts, is the only means of warding off these serious complications. In both the above cases Martens thinks that earlier operative intervention might have prevented the fatal complications.

Münchener medizinische Wochenschrift.

October 15, LIV, No. 42, pp. 2073-2120.

98 *Tetanoid Conditions in Children. (Tetanoide Zustände des Kindesalters.) T. Escherich.
99 *Pain and Blood Pressure. (Schmerz und Blutdruck.) H. Curschmann.
100 *Treatment of Foreign Bodies in the Esophagus. (Fremdkörper in der Speiseröhre.) R. Haecker. Id. W. E. Lunzer.
101 *Etiology of Appendicitis. (Perityphlitis.) J. P. Naab.
102 100 Appendicectomies on Young Soldiers. (100 Blinddarmoperationen.) A. Schönwerth.
103 *Air and Sunlight in Treatment of Granulating Wounds. (Behandlung granulierender Wunden.) C. Haeberlin.
104 Death from Reflex Anuria After Catheterization of the Urethra in Man with Extremely Contracted Kidneys. (Reflektorische Anurie nach Harnröhrensondierung bei einem Manne mit hochgradigen Schrumpfnieren.) H. Bennecke.
105 Sepsis from Colon Bacillus in Two Cases of Abdominal Affections. (Bacterium coli commune als Sepsiserreger in 2 Fällen von Abdominalerkrankungen.) E. Krencker.
106 *Improved Technic for Roentgen Work. (Neuer Röntgenapparat und einige mit diesem erzielte Resultate.) J. Rosenthal, Munich.

98. **Parathyroids Probably Responsible for Tetanoid Conditions in Children.**—Escherich states that few clinical pictures have undergone such a transformation during the last ten years as that of tetany in children. Until 1890 it was generally regarded as a harmless neurosis, but he found it so frequent—especially the laryngospasm, which he regards as its most important and characteristic manifestation—that he began then to preach the almost vital importance of tetanoid conditions in young children. The Trousseau, Chvostek and Erb signs and the over-excitability of the nerves disclose the latent cases. Examination of 328 infants less than 6 months old revealed tetanoid conditions in 2 per cent. of the infants less than one month old up to 56.2 per cent. of those ranging to 6 months old. The children affected are almost invariably those brought up on the bottle and those with signs of rachitis. A further interesting clinical fact is the frequent discovery of nervous disturbances and defects in children who had tetany in early infancy. The influence of the food, especially from the therapeutic point of view, is unmistakable, but the principal factors seem to be the season and a permanent predisposition on the part of the individual. The predisposition can be explained only by autointoxication from some disturbance in the metabolism, this autointoxication acting on the nervous system and inducing the tetanoid phenomena. After long groping in the dark the subject was brilliantly illuminated, he says, by the discovery that partial removal of the parathyroids induced in man and in animals the clinical picture of tetany. It was found at Escherich's clinic on examination of 89 infants in an unselected series that the parathyroid bodies had been injured by hemorrhage in 39 instances. The hemorrhage probably was the result of trauma during delivery. In every case in which these hemorrhages were found the children had displayed not only over-excitability of the nerves, but also other indications of tetanoid conditions up to actual convulsions, the severity of the clinical picture being in direct proportion to the severity of the pathologic findings in the parathyroids. This explains, he states, the enormous frequency of tetany in early infancy. The parathyroids also may be functionally insufficient without appreciable pathologic findings. There may be a congenital hypoplasia or the parathyroids may not be functionally developed at the time of birth and may require some months to complete the average of growth. Besides the predisposition, some occasional cause is probably the final decisive factor—the season, the kind and amount of the food, unhygienic conditions, etc. The almost constant coincidence of rachitis with the tetanoid conditions is highly significant, especially when coupled with the stunting of the growth of the teeth observed by Erdheim in rats after removal of the parathyroids. Vassale was the first to announce the parathyroid nature of tetany, and he treats it with extract of the parathyroids, but Escherich has been unable to detect any clinical benefit from this treatment, although he has tried it on a large scale. He adds that it is rational to suppose that the function of the minute parathyroid bodies is essentially different from the antitoxic action of the thyroid gland, after which this parathyroid treatment is modeled. New routes must be sought to reach the goal, he remarks, citing Gerhardt's phrase: "The fruit, therapy, ripens on the tree of knowledge."

99. **Differential Value of Fluctuations in Blood Pressure During Pain.**—The industrial insurance legislation in Germany has rendered the detection of simulation of pathologic conditions one of the vital questions of the day. The *Deutsche med. Wochschr.* devoted an entire number recently to the study of simulation in various domains of pathology. Curschmann has been studying the behavior of the blood pressure during spontaneous and induced pain, and announces that in 18 out of 20 persons with normal sensibility, the blood pressure rose by 8 to 10 mm. mercury under pain induced by application of the faradic electrode on the upper third of the thigh. In the 2 other persons the blood pressure rose by 10 and 15 mm. On the other hand, in 5 cases of organic affections of the spinal cord, multiple sclerosis, etc., the blood pressure remained unaffected by the pain, as also in 9 cases of hysteric affections. Organic and hysteric disturbances of sensibility thus do not manifest any reaction on the part of the blood pressure when irritation is applied to analgetic regions. This fact throws a sidelight on the reality of the hysteric sensory disturbances, which some still doubt. A reaction on the part of the blood pressure to induced pain can, therefore, serve to differentiate normal conditions when pathologic conditions are feigned. In conclusion Curschmann describes the behavior of the blood pressure during spontaneous abdominal pain. In some cases of gastric and intestinal crises in tabes and also in cases of lead colic the blood pressure ran up to 170 and 210 mm. mercury and dropped abruptly to normal, 115 or 120 mm., as soon as the crisis was over. There is probably some vasomotor cramp in the splanchnic region in these conditions. In a large number of cases of abdominal pain from other causes, gastric ulcer, gallstones, appendicitis, etc., he found only a moderate increase in the blood pressure, never more than 10 mm., as also in cases of neuralgic pain in the abdomen. A considerable increase in the blood pressure might, therefore, reveal latent tabes or lead poisoning in some cases.

100. **Foreign Bodies in the Esophagus.**—Haecker reports some instructive cases and praises the Weiss instrument for removing foreign bodies from the esophagus. The instrument either pushes the foreign body down into the esophagus, or, when the "hair umbrella" is spread, draws out the foreign body. In one of the cases reported a partial set of false teeth had remained in the esophagus for four months. Whenever the patient ate, a violent fit of coughing followed, which was accepted as proof that a communication existed between the esophagus and the air passages. The teeth had lodged on a level with the fourth thoracic vertebra and the set was removed by external esophagotomy. The patient was normally delivered of a healthy child at term a week later, but symptoms persisting indicating a fistula between the esophagus and trachea, an opening was made into the stomach and the patient was fed in this way for two months. By that time the fistula had healed and all symptoms on the part of the air passages had subsided, so that the gastrostomy opening was closed and the patient dismissed in good health, having gained 22 pounds in the last two months. Haecker advises this early gastrostomy when a foreign body has induced perforation into the air passages.

101. **Etiology of Appendicitis.**—Naab practiced for several years at Diarbekr, on the Tigris, and among 1,732 patients encountered only 2 cases of appendicitis. Other physicians in Asiatic Turkey also state that appendicitis is seldom seen—about once in a thousand patients—although all make a point of examining the condition of the appendix in all cases of abdom-

inal pain. Naab ascribes this rarity of appendicitis in the Orient to the absence of meat and the preponderance of fruit in the diet of orientals. Bread, rice and fruits of all kinds, melons, grapes, figs, etc., form the diet in the Orient; skin and seeds are all swallowed. Constipation seems to be as frequent as in Europe, but the bulky vegetable diet sweeps out the intestinal canal as it passes along, no matter how slowly. On a meat diet there is little waste; hard balls form, and they lodge along the route, the conditions near the appendix particularly favoring their arrest at this point. Irritation follows; infection may be superposed, and the clinical picture of appendicitis results.

103. **Treatment of Granulating Wounds.**—Haeberlin believes in allowing free access of air and sunlight to granulating wounds to hasten the natural processes of repair. He exposes the wound for two or three hours in the morning to the direct rays of the sun, not passed through glass, changing the position of the wound to keep it always in the direct sunlight as the hours pass. He reports experiences which confirm the favorable influence of sun and air on granulating wounds.

106. **Improved Roentgen Technic.**—Rosenthal presents an illustrated description of a new inductor with which he has been able to secure fine skiagrams. Among the examples shown are some "teleroentgenograms," as he calls skiagrams taken from a distance of 6 feet with 4 seconds of exposure. One shows the pelvis of a man; distance, 6 feet; exposure, 8 seconds. Rosenthal is now engaged in applying this new technic to the kinematographic reproduction of the heart action.

Therapie der Gegenwart, Berlin.

October, XLVIII, No. 10, pp. 433-480.

107 *Various Kinds of Anuria; Pathogenesis and Treatment. L. Casper.
108 Action of Roentgen Rays on Experimental Leucocytosis. D. Gasis.
109 *Treatment of Diffuse, Progressive Peritonitis with Continuous Rectal Saline Infusion. (Behandlung der diffusen, fortschreitenden Peritonitis mittels permanenter, rektaler Kochsalzinfusionen.) R. Kothe.
110 Clinical Forms and Treatment of Endometritis. H. v. Bardeleben.
111 The Gout Question. (Zur Gichtfrage.) T. Brugsch and A. Schittenhelm.

107. **Various Forms of Anuria and Their Treatment.**—Casper reports five cases of anuria to illustrate the various causes of this condition and the indications for treatment in each case. In the first case, a new-born infant passed no urine for two days. After relief of a slight congenital phimosis and enlargement of the unusually small outer orifice a catheter was passed into the bladder, but this was found almost empty. A few hours later, however, the child urinated normally. Casper believes that the peripheral irritation had evidently induced a vasomotor spasm in the vessels of the kidney, rendering these organs unable to secrete urine. In the second case anuria had persisted for five days. The kidneys were the seat of severe chronic inflammation; the patient presented extreme cyanosis, dyspnea, anasarca, wiry pulse, enlarged heart (the sounds were pure), and râles all over the lungs. Both kidneys were very large and after failure of the usual measures, including venesection, decapsulation was done. Improvement was evident at once and the secretion of urine soon became normal. The patient is in fair condition nearly two years later. In the third case the right kidney was removed on account of a tuberculous abscess and numerous miliary nodules. The patient could not spare the time for the functional tests of the other kidney, which was assumed to be sound, as the man was in good general condition. This assumption proved to be a mistake; anuria developed and persisted for eight days without much general disturbance, but the patient died in coma on the ninth day after nephrectomy. The remaining kidney showed signs of interstitial and parenchymatous nephritis, and fibrous degeneration, with tuberculous processes. This is the only death Casper has had in 100 nephrectomies and the only case in which he omitted examination of the other kidney before operating. In the fourth case, an apparently healthy workman suddenly experienced violent pain in the abdomen and vomited repeatedly. The region of the left kidney was painful; only a few drops of urine could be voided and that contained numerous red corpuscles. Catheterization of the ureters was successful also in this case. The catheter evidently encountered some obstacle in the left ureter, but in the right it passed readily into the kidney hilus. Injection of a little water into the right hilus, eliciting slight pain, excited the kidney to contract and urine at once began to dribble from it. Conditions were promptly restored to normal. He assumes that there must have been a stone in the left ureter, although Roentgen findings were negative and no stone was passed. In some cases he has moved the stone by injection of oil, in others by the impact of the catheter. Jahr has also been successful by distending the ureter with a balloon. In the fifth case, the anuria was of hysterical origin. It persisted for ten days, but there were no signs of serious uremia; the entire abdomen was tender, and the anuria was arrested by catheterization of both ureters. He ascribes the anuria in these cases to a hysterical spasm of the ureters, with spasm of the kidney vessels, like the spasm of the bladder sphincter in case of hysterical retention of urine. After failure of all other measures the urine began to drip the moment the catheter had passed through the ureter. In hysterical cases the physician is justified in expectant treatment, with merely hot packs and sitz baths, copious drinking, suggestion and a narcotic. If all these fail, catheterization of the ureters is indicated.

109. **Treatment of Diffuse Progressive Peritonitis with Continuous Rectal Saline Infusions.**—Kothe reports 12 extremely severe cases of progressive peritonitis from gangrenous appendicitis in which he was able to save most of the patients by rectal infusion of saline solution. The fluid is placed in an enema bucket raised a foot and a half above the bed. The outlet is closed to allow only 1 or 2 drops a second to escape. From 2 to 3 hours are required for the passage of a pint, and by repeating the procedure every 12 hours, from 4 to 6 quarts can thus be introduced into the rectum and retained. This relieves the tormenting thirst, raises the blood pressure, influences the heart action favorably, starts abundant diuresis and intestinal peristalsis, and allows nourishment to be given in the infusion, without disturbing the patient or even interfering with his sleep. He sometimes adds 150 gm. of grape sugar, equal to 615 calories, to 3 liters of the solution. To keep the solution warm he stands the enema bucket in a wooden box lined with flannel, with an inner layer of ground cork or sawdust.

Hospitalstidende, Copenhagen.

September 18, L. No. 38, pp. 1009-1040.

112 *Nitrate of Silver Gauze, Catgut and Nitrate of Silver in Solution. (Lapisantiseptik.) T. Rovsing.

112. **Antisepsis with Nitrate of Silver Gauze, Catgut, Solutions, Etc.**—Rovsing makes extensive use of silver nitrate in his clinic, using it to prepare suture material, to impregnate gauze and wicks and in aqueous solutions for local application. Ten years of extensive experience have confirmed its advantages over all other antiseptics, he asserts.

Books Received

Acknowledgment of all books received will be made in this column and this will be deemed by us a full equivalent to those sending them. A selection from these volumes will be made for review, as dictated by their merits, or in the interests of our readers.

A SYSTEM OF MEDICINE. Edited by Thomas C. Allbutt, M.A., M.D., LL.D., D.Sc., F.R.C.P., etc. Regius Professor of Physic in the University of Cambridge, and Humphrey D. Rolleston, M.A., M.D., F.R.C.P., Physician to St. George's Hospital and Victoria Hospital for Children. Volume III. Pp. 1040. Cloth. Price, $5.00 net. New York: The Macmillan Co., 1907.

METABOLISM AND PRACTICAL MEDICINE. By Carl Von Noorden, Professor of the First University Medical Clinic, Vienna. Anglo-American Issue, under the Editorship of I. Walker Hall, Professor of Pathology, University College, Bristol. Volume III. Cloth. Pp. 1320. Price $6.00. Chicago: W. T. Keener & Co., 1907.

A TEXT-BOOK OF PATHOLOGY. By Francis Delafield, M.D., LL.D. Eighth Edition. Pp. 1075. Illustrations 663, including 13 full-page plates. Cloth. Price, $5.50. New York: William Wood & Co. 1907.

BLOOD STAINS: THEIR DETECTION AND THE DETERMINATION OF THEIR SOURCE. By Major W. D. Sutherland, M.D. Pp. 167. Cloth. New York: William Wood & Co., 1907.

MYSTERIOUS PSYCHIC FORCES. By Camille Flammarion, Author of "The Unknown." Pp. 466. Cloth. Price, $2.50. Boston: Small, Maynard & Co., 1907.